Textile World

Established 1868

With which are combined

TEXTILES and POSSELT'S TEXTILE JOURNAL

334 Fourth Ave., at 25th St. NEW YORK, NOVEMBER 7, 1925 VOL. LXVIII, NO. 19

The Inside Story of Ford Textile Experiments

Results of Investigation Thus Far Indicate That Very Little Cotton Will Be Used—Company Is Producing Experimentally a Fabric With Wool Warp and Flax Filling for Upholstery Purpose and an All-Flax Fabric for Backing for Artificial Leather

By Douglas G. Woolf

HERE are a few of the rumors which have been current during recent years with regard to Henry Ford's entrance into textile manufacture:

"Ford has built a cotton mill."

"Ford is building a cotton mill."

"Ford is negotiating to purchase a southern cotton mill."

"Ford has built a woolen mill."

"Ford is manufacturing linen fabrics for his upholstery and for use in tires."

"Ford is going to build an immense textile plant at Muscle Shoals."

"Ford is producing flax fibre at 8c a lb."

The True Facts

Through the courtesy of Edsel Ford, vice-president of the Ford Motor Co., TEXTILE WORLD has been permitted to secure from C. W. Avery, in charge of development work for the company, the actual facts regarding this new phase of its enterprises.

Summarized briefly, these facts are:

Ford has not built a cotton mill, a woolen mill, a linen mill or any other type of textile plant.

Ford has not purchased—nor is he planning to purchase—any textile mill either North or South.

Ford's textile work thus far has been entirely experimental in nature. The results to date indicate that the company will not use cotton in its textile manufacture but will confine itself to flax and wool.

No one in the Ford organization, from Henry Ford down, knows just where the present research will lead but every member of that organization knows it is the forerunner of important commercial developments. And anyone who, like the writer, has had the opportunity to visit the company's plants, to see the various textile experimental departments and to talk with the men in charge of those departments, will be equally confident.

The Ford Motive

Before detailing the Ford textile work it is advisable to state the motive back of this enterprise.

Henry Ford has not started out to revolutionize the textile industry. He is not imbued with the profound purpose of "jitneyizing" the manufacture of cloth—and thus adding new glamour to the Ford name. He is, in fact, concerned with textile production methods only so far as they affect his real life work, which is the manufacture of Ford cars.

What is Henry Ford doing in the textile line?

This question has been asked hundreds of times in the last few years—and answered in almost as many different ways.

The accompanying article contains the first authoritative information which has been published on this subject since the statement issued by Lockwood, Greene & Co. two years ago.

And during those two years the Ford textile plans have changed radically—as any reader of this article will admit.

It is a truism that this life work has involved the production of a good automobile at the lowest possible cost to the consumer. This in turn involves the necessity of purchasing or making each of the hundred or more component parts of that automobile at a minimum cost.

Textiles constitute one of the important ingredients. The Ford Motor Co. uses approximately 100,000 yds. of cotton cloth and 20,000 to 25,000 yds. of woolen cloth every day in the year. The expense of such an item must be scrutinized most carefully.

This then is what Henry Ford hopes to accomplish by his textile experiments: To secure the fabrics best suited for his purposes, at the lowest possible cost.

His Strategic Position

This motive is, in itself, not an unusual one. Many other manufacturers have similar ideals—and yet no one looks to them to "revolutionize" the textile industry. The answer is that Mr. Ford enjoys a remarkable strategic position which almost preordains success. In the first place, he has almost unlimited capital. In the second place, he has an assured market for his textile products—an intra-company consumption which he can gauge to a nicety. In the third place he knows just exactly what kind of a fabric he wants and can start with the single purpose of manufacturing it, thus eliminating all the "frills" of ordinary textile production. Finally—and most important—he has no traditional textile background which he must revere; he can tackle this job just as he has all other jobs connected with the making of the Ford car, that, is, from the ground up. He doesn't know what can't be done; consequently he probably will do it.

Present Equipment

At the present time, the Ford Motor Co. has the following textile equipment:

A one-set woolen spinning and weaving plant, complete with the exception of wool scouring machinery. This is located in the center of one of the vast buildings which comprise the Highland Park plant of the company at Detroit.

A specially-constructed flax decorticating and scutching machine installed in one of the buildings of the Dearborn plant adjacent to an experimental flax farm of 600 acres, located on the Ford estate there.

A flax spinning and weaving plant, including 60 Draper automatic looms, located in the Aviation Building at the Highland Park plant. This is the unit which was originally planned as a cotton spinning and weaving plant but which was changed over when the Ford interest was directed toward flax. At present the only cotton work being done is the production of brake bands and insulation tape on a few experimental machines—and with purchased yarns as a basis.

The Present Product

With this equipment, the company has produced a wide range of experimental fabrics but has finally concentrated on two important types: An all-flax fabric, 54 in. wide, running approximately 1.5 yds. to the lb., for use as backing for the company's artificial leather to replace the cotton cloth now being used, which runs 1.05 yds. to the lb. A 21-oz. cloth, woolen warp and flax filling, 54 in. wide, for use in automobile upholstery and tops and sides of closed cars.

The Flax Investigation

It will be noted that flax enters into both these fabrics and that in each case it replaces cotton. The motive which led to this development is an interesting one. Naturally the company visualizes flax as a fibre which could be used satisfactorily in these products—but, more important still, it realizes that flax offers a far greater opportunity for reduction from present costs than does cotton. It argues as follows: Flax has always been looked upon as a fibre which is in a class by itself. It has generally been accepted that its individual qualities and the conditions under which it has been grown and manufactured warranted a decidedly higher price. Consequently no particular effort has been made to simplify the processes in order to reduce the cost. As a result, recent development in this branch of the industry has been conspicuously absent. Traditional methods have been accepted by generation after generation.

It is just such a field that offers the Ford organization its greatest opportunity. There is a marginal leeway here which invites the type of research in which that company engages.

Characteristically starting at the bottom, the Ford Motor Co. has first investigated thoroughly the question of flax supply. It will need the product of approximately 50,000 acres—or roughly 75,000 lbs. of flax fibre per day. It has proved to its own satisfaction, through experimentation on the 600 acres set aside to flax at Dearborn, that this plant can be grown successfully in Michigan. It has figured further that an ample supply could be secured for its needs if the farmers of two counties in that State could be induced to plant flax in rotation with their other crops. At the present time, the company has no in-

tention of going into commercial flax culture itself. It visualizes this as any agricultural job, to be carried on in connection with other types of farming. Furthermore it believes that its cultivation will be undertaken by Michigan farmers if they are assured of an outlet for their product at a fair, fixed price.

Preparation of Flax Fibre

The next question considered was that of securing the fibre from the plant. Here there seemed to be the greatest amount of unnecessary labor—and consequently the greatest opportunity for saving. The ordinary method in this country is to cut the flax, gather it in bundles; transport to the threshing machine where the seed is separated from the straw; carry it back to the fields for retting; gather it again in bundles and transport it to the decorticating machine; and finally to carry it to the scutcher.

The Ford method is to cut the flax, allow it to lie in the field, seeds and all, for retting, the time for retting depending on the wetness of the season. It is usually turned once or twice and when in proper condition is gathered like hay without further handling, loaded into wagons and taken direct to the nearby plant. Later on, when large quantities are grown at a distance, it will be bundled for transportation. The seed is sown like wheat, instead of being drilled as is the case where the flax is grown for seed.

The retted flax as it comes from the field is put through a conditioning machine of the Lorimer type, where moisture is taken out or added as required. It has been found that a moisture content within the limits of 4 to 10% is desirable.

After being properly conditioned it is then fed by hand to the first section of the special machine, where the threshing, decorticating and scutching are all done in one operation. This machine is the most interesting phase of the Ford flax experiment. They call it a ginning machine. It has been built by the development department of the company, but incorporates certain features of another machine.

It comprises six sections, each section driven individually by a variable speed motor. Each of the first three sections consists of six pairs of fluted rolls followed by a combing roll. The fourth section has eight pairs of fluted rolls in rotary formation, followed by another combing roll. The fifth section comprises two rotary sets of six pairs of fluted rolls each—also followed by a combing-roll. The sixth and last section contains an apron which carries the fibre from the combing-roll of the preceding section. As it passes down the apron it is "tossed" twice by an ingenious overhead device which shakes the last traces of seeds or shives from the fibre.

Each section is driven at about a 50% greater rate of speed than the preceding section. In addition the rolls in each succeeding section are more finely fluted.

The stalks enter in a hit-or-miss fashion, without any attempt to lay them parallel. As they pass between the six pair of fluted rolls in the first section, most of the seeds are removed and the first crushing of the stalks is accomplished. The combing roll helps to straighten out the stalks and to comb out the flax fibre.

Each successive section carries on this operation. The gradual increase in speed, mentioned previously, provides the proper tension and insures continuous passage and increased straightening of the fibres. When the latter reach the outlet of the fifth section, they are very nearly free from all seed and straw—the remainder being extracted after the final "tossing."

The successful operation of the machine depends largely upon exercise of care in feeding. If any attempt is made to "crowd" it, an excessive amount of straw is found at the end. With proper feeding, however, clean fibre is secured. The length of fibre is from five to twelve inches as it comes from this machine.

The experimental machine now installed contains 10-in. width rolls and is turning out approximately 400 lbs. of fibre per day. The type of machine to be built eventually will have 36-in. rolls and will have a daily capacity of about 1,000 lbs.

The company has installed also a complete and continuous equipment for the cleaning of the flax seed, which will of course be sold in the regular market.

Flax Spinning

It will be realized that the fibre resulting from the above operation is part line flax and part tow. This combination has proved entirely suitable for the company's purpose.

© Underwood & Underwood

Henry Ford

Its conversion into yarn, as now conducted experimentally in the Aviation Building of the Highland Park plant, is done on standard equipment purchased abroad.

The fibre is passed first through a teaser card and is then conditioned again. After conditioning it is carded; brought out in sliver form; passed through four drawing or reducing frames, equipped with automatic stop-motions devised by the Ford company; then through a roving frame—and finally to the flyer spinning frame.

It is in the actual spinning that the company has made the most radical departure from present practice. Realizing the lost motion in the method of spinning flax on spools and then rewinding on to bobbins for the filling yarn, the company's development department has converted part of its frames so that the flax can be spun directly onto the filling bobbins. This one change alone presages marked economies in flax spinning. Experiments are now being made in ring spinning and if successful, ring spinning will replace flyer spinning.

The 60 automatic looms are at present operating entirely on the cloth to be used as backing for the company's artificial leather. As mentioned previously, the linen cloth now being produced is only about two-thirds as heavy as the cotton fabric now being used, the added weight necessary being given by the addition of more water-proof coating material.

In addition to the above mentioned equipment, the flax spinning and weaving department contains a standard continuous piece dyeing machine for processing of the all-linen backing cloth.

Effect on Linen Industry

It is impossible to gauge the extent to which these experiments may eventually affect the linen industry, and indirectly the cotton industry. It is true that the type of linen material which the Ford Motor Co., plans to manufacture is not comparable with the ordinary type of textile fabric. However, if the company feels that, through its short-cut method of preparing the flax, it can secure a cloth equal in tensile strength to a considerably heavier cotton cloth—and at substantially less price—it is certainly possible that this economy in production can be applied to the manufacture of other types of linens. The fibre which the company is now producing is part line flax and part tow but it is not possible to state that the same method might not be adjusted to the production of straight line flax.

At any rate, anyone familiar with the past acomplishments of the Ford Motor Co. would think twice before dismissing this latest departure as unimportant.

Ford Woolen Manufacture

Just as the company first considered the question of raw material supplies in flax experimentation, so has it taken up its work in the woolen field. Its present plan is to utilize the wool grown locally in Michigan. It will be noted that it finds the first evidence of lost motion in the securing of the raw material itself. The company believes in the location of manufacturing enterprises adjacent to the raw material; and if a supply of the latter is not available there, it believes in creating such a supply.

The one-set woolen mill now in operation at the Highland Park plant of the company is, from the visitor's standpoint, the most spectacular feature of its textile experimentation. After passing through apparently endless departments devoted to the manufacture of Ford parts, he comes suddenly upon a complete woolen plant set in the midst of the automobile production. It strikes the visitor with as much surprise as if he found a sewing circle in the center of a boiler factory.

The layout of this woolen plant is so compact that it impresses one as a miniature mill. This impression is incorrect however since all the equipment is of standard size. By providing absolute continuity of the machinery, the company has compressed

this plant into probably one-third to one-half the floor space usually occupied by equipment of this nature.

The Ford woolen plant is not in itself "revolutionary." Its claim for distinction lies largely in this continuity of process and in the development of countless minor mechanical improvements which tend to reduce the labor factor and insure perfection of product. It suggests the range layout in a modern bleachery in reduction of handling operations.

The stock is dyed and dried on standard equipment and then passed by suction to four storage bins. The pipe through which the stock passes has a four-way switch so that it can be directed into any one of the four bins desired. These bins are unique in that they are provided with movable sectional partitions which can be extended diagonally across the entire height of the bins, thus permitting representative sampling of the whole batch.

The stock is then mixed on the floor and passed to the picker, whence it goes directly to another set of bins before entering the 60-inch cards. They then follow consecutively the drawing, mule spinning, warping and weaving. The latter is done on several types of automatic looms, with which the company is experimenting at this time. No sizing of the warps is done at present, the superintendent of the woolen department stating that his yarn is coming out so excellently that it does not need sizing. An interesting feature of the intermediate processes is the fact that the company has developed a device to make its spooling continuous.

After weaving, the cloth is passed to an inspection machine, consisting of a series of electric lights flooding through ground glass, in front of which the fabric is unrolled, quite similar to improved methods of inspecting tire fabrics. Imperfections are detected quickly and positively.

In the finishing of the cloth, the brushing machine, dewing machine and press are in range. In addition a device has been developed for automatic doffing of the rolls at the delivery end of the press so that no operator is required once the range is started.

It is not possible to give actual costs of the 21-oz. fabric with woolen warp and flax filling manufactured in this department for use in upholstery and tops of closed cars, because experimentation is still going on. It is sufficient to say that even at this stage the company has found that it can produce a cloth suited exactly to its requirements at a cost considerably below the fabric it has been purchasing.

Spirit of Organization

These sketchy details do not by any means tell the real story of the Ford textile development. That story is found in an intangible spirit which pervades the entire organization and which has been the basis of remarkable progress in other phases of Ford car manufacture. That spirit can be appreciated only by a visit to the Ford plants and a series of talks with members of the company's staff. There seems to be no recognition of the impossible in the organization. Practically every individual with whom the writer discussed the future would outline some seemingly impossible feat and would conclude by saying: "We'll probably do it that way some day."

The basis for this attitude, as already indicated, is the fact that none of the men responsible for the development work has an inhibiting back-ground of traditionary experience. Most of the men in charge of the textile departments have come out of the Ford organization itself and have tackled this new work as merely another phase of automobile production. Backing up these executives is a corps of young men, fresh from the Ford training school, who naturally are equally unhampered by precedent. Furthermore, no individual connected with the company needs to hestitate about suggesting some novel idea. He does not have to face the "bogey" of unsympathetic superiors such as hampers progress in many a textile mill. The whole key-note of the organization is one of encouragement, not discouragement, of such ideas. Big as the company is, it has not created an inflexible machinery through which suggestions must pass before adoption. The head of one of the textile departments, for example, told the writer that he felt perfectly safe in trying out any new method and then submitting results, not theories, to his superiors. This impresses the writer as the real key to progress.

Possibly he would not be quite so expectant of important achievements if he had not witnessed the results attained by the Ford Motor Co. in other lines. Plate glass manufacture is a case in point. Some time ago the company had under consideration the purchase of a glass plant. The executives of the company, accompanied by members of the development staff, visited several existing factories and came away impressed with the fact that the method employed was inefficient and unnecessarily expensive. It knew nothing about plate glass production but it knew the ingredients required and the product desired. With this meager background, the development department started out to convert these ingredients into plate glass by the most direct method. Today it has a plant which is a model of efficiency and which is producing that material at far less cost than it can be purchased. A continuous sheet of glass passes from the furnaces through a series of ovens and conditioning chambers, several hundred feet in length; is cut to the desired size as it comes out of this equipment and passes back on a parallel aisle for the grinding and polishing. The company is securing from this plant a type of glass which exactly fits its requirements and which, it states, is far more uniform than any it purchased previously. Here too is an example of the advantages of producing a material for certain definite requirements. If a sheet of glass intended for a window contains a slight defect, it does not need to be scrapped. The imperfection can be cut out and the remainder cut into smaller sections for windshield purposes.

The Future

This illustration could be multiplied many times. The company has sixty-four complete manufacturing units within its organization, now turning out products which were formerly purchased. There seems to be no reason why similar results cannot be expected in the textile line and it would appear that methods developed in this direction should have a real message for the textile industry as a whole. It is known that an investigation of the cord tire field has been made by the company and it is quite probable that their textile research will later extend into that branch as the only other important textile auxiliary with which they are not already developing.

Consequently it is going to be absorbingly interesting to visit the Ford plants a year from now, two years from now and ten years from now because the Ford textile story is one of action. This survey is in the nature of a prologue and the acts still to be written may affect cotton manufacture, wool manufacture and linen manufacture in some such way as the Ford car affected the automobile industry.

Status of French Textile Industry

Report of Stuart W. Cramer, Jr., on Visit to France as Delegate of American Cotton Mfrs. Assn.

THE following report has been submitted to the American Cotton Manufacturers Association by Stuart W. Cramer, Jr., treasurer of Cramerton (N. C.) Mills, Inc., on his visit to France as a representative of that association, authorized at the annual convention in May at New Orleans:

"Merely as a matter of record, I would say that my trip was in the nature of an exchange of industrial and business representatives between France and the United States under the auspices of the Franco-American Branch of the American Good Will Society—the object being to establish closer industrial, political and social relations between the two countries, by personal contacts of those engaged in similar work in their respective countries.

"My trip occupied about seven weeks, and at the outset I wish to acknowledge the many courtesies and kindnesses extended to me by Mr. R. D. Jenkins, secretary of the Franco-American Branch of the society in New York; M. Jean Rouvier, secretary of the French Branch in Paris; and M. Jules Siegfried of the French Committee. The initiative in the whole matter was taken by Miss Anne Morgan, of New York and Paris, who is devoting a large amount of her time toward the cultivation of closer affiliations between the two countries.

"In the short time that I could be away, the observations I was able to make of the French textile plants which I visited were extremely general, and I might say casual. The itinerary naturally followed about the same course that we unquestionably would have arranged for a French delegate to this country under similar circumstances. Many French mills were decidedly opposed to allowing a foreign competitor, particularly an American competitor, to go through their plants at all; some who did show me through their plants were obviously more or less on their guard; and a few of them extended every opportunity for my acquiring information and answered questions freely. On every occasion, however, the French people were exceedingly courteous, more than friendly, and undoubtedly went as far, if not further, than we would have gone under the same circumstances. I refrain, for apparent reasons, from mentioning the names of any plants or individuals.

"It was not my purpose to pay any attention whatever to spinning plants, but only to styling, designing, weaving, dyeing and finishing. This was what made my position both delicate and difficult, because most French designers and manufacturers are quite bitter on account of the many Americans who go abroad to get their designs and copy them in the United States.

Points of Interest

"The following points, made at random, are those of outstanding interest to our industry:

"(1) As a rule, French plants have their designing done by Paris designers, and but little work of that kind is done at the mills. I had quite a lengthy interview with M. Rodier, the leading French designer. Of course, his work is mostly for hand weaving, but it is largely copied in printed work in America. His view of styling is that it is a personal artistic gift; he himself leans more toward 'new art' than to the more conventional classical designs. French designers in general take styling as an art much more seriously than in this country; they endeavor to create rather than to imitate, to lead rather than to follow—which, of course, is comparatively easy on account of their prestige. I also had quite an interview with M. Jacques Worth, the great French dressmaker, with particular reference to fabrics for women's wear.

"(2) The general trend of almost all French colored work is to weave in the gray just as is also largely done in this country, and then to piece-dye, finish and print the goods for their colored effects. One thing that impressed me particularly is the trend toward the use of mordants, both on

yarn and cloth, followed by cross-dyeing, instead of using dyeing and finishing in the usual way. This is something that our own finishers must naturally also be working upon more or less unobtrusively, because it seems to be one of the most important developments in French textile circles.

"(3) One thing that astonished me, however, I must again emphasize, is that almost all of the cotton looms in France seem to be operated as single box, with or without dobbies and jacquards; there is little or no yarn-dyed goods being made with multiple box looms. In practically all classes of goods, the French see few advantages in automatic looms, preferring closer attention to work of the operatives and higher loom speeds to make a superior fabric at less cost.

"(4) In France, just as in the United States, natural silk or rayon decorations predominate in the better grades of cotton fabrics.

"The French operatives average only $1.00 per day wages and give far closer attention to their work than any operatives I have ever seen in America. French families have worked for generations in their plants and take a craftsman's pride in their work. Whether we like to admit it or not, French workmen on the average will turn out better and more work with the same amount of labor than in corresponding mills in America. They never leave their work in the mill unless absolutely necessary; they do not congregate and converse, and they do not sit or stand around merely watching to see that the looms keep running; they closely and ceaselessly go from one loom to another so that the highest possible production is gotten from the looms, and practically all defects are caught before they make seconds.

"It is also my observation that a French plant is usually operated with fewer operatives than could possibly be done in America with the same equipment.

"One thing that strikes a visitor to a French mill is the splendid and healthy relationship that exists between all ranks in the plant; leading and not pushing is obviously their method; and the French workman evidently responds more to friendly interest than to the type of discipline of the so-called 'efficiency experts.' I am aware that it is the fashion in America to depreciate foreign workmen and to boast of our own superior intelligence. I would be the last man to admit that our people *cannot do* as well as the French, but I do not believe that they are actually doing it, as a rule. As to whether the French workman is or is not just about as keen and bright-looking as any other, I have brought back some photographs of groups of operatives in the different departments in different French mills, which I suggest be published from time to time in the *ACMA Gazette* in order that not only our managements, but our own operatives may have a chance to size up the kind of people with whom we are in foreign competition.

Very New or Very Old

"(5) The equipment in French mills is, as a rule, either extremely modern or extremely old. It is all practically English, French or German manufacture. All that which replaced the old French machinery destroyed during the war is the newest and most up-to-date equipment, and unquestionably with their cheap labor and up-to-date equipment can produce the finest grades of goods at less than one-half the cost than we can possible do. The French mills are very prosperous and have run full time through all the periods of depression in both England and America, except for a couple of months in 1920.

"(6) Naturally, in the light of what has already been said, French finishing and printing establishments are unusually modern and efficient, and are very secretive of their methods. Mill men who regularly furnish goods to French finishers and printers tell me that they have never seen the inside of those establishments. My own observation was that they are very similar to the best American plants which I have seen; but that the French practice is to carry this department of manufacture further than is done in the United States. Elaborate designs and styling are very much in vogue now all over the world, and the French designers, finishers and printers are not only experts and artists in their work but their methods of manufacture particularly lend themselves toward elaborate and bizarre effects. Just as in this country, the converters do both a commission business and a merchandising business, in which they buy gray goods according to their own specifications and finish and style them themselves.

"(7) While there is a moderate amount of ring spinning for the medium and coarser counts in France, nearly all the fine work is mule spinning. I am inclined to share the general opinion that fine mule-spun yarns are a very distinct advantage to the foreign manufacturer; it is not adapted to the mass production of American methods and it is to be regretted that mule spinning has been made so very difficult by the operatives in America that we can not go in for it in more of our work. There is very little mule spinning in America, because, I am informed, of the autocratic methods of the employes' unions. Mule spinning is done by men and the so-equipped mills are not only expensive to operate but expensive to build and equip.

"(8) In conclusion, I may say that while my trip to France was very delightful and while my opportunities for inspecting plants were sufficient for obtaining a bird's eye view, I do not anticipate that we are at all likely to expand this first visit of industrial delegates to the extent of its becoming a custom; the success of the trip is largely in just what would be expected of an arrangement under the auspices of the Franco-American Good Will Society. Such intercourse unquestionably promotes good feeling and friendly relationships; but, definite business results are hardly to be expected. As a matter of fact, the original idea was to have youths of the different countries exchanged who were not yet established in business—the system worked out by the Roubaix-Tourcoing Syndicate which has been working for some time has generally resulted in commercial relations rather than technical, many cases having already occurred of the delegates becoming foreign representatives, connected with the merchandising end of the Roubaix-Tourcoing industries.

"When I accepted the appointment as delegate from America, I rather anticipated this situation, and made only the single condition that I did not think it worth while for the American Cotton Manufacturers Association to spend money for such a trip and that if I went it must be at my own expense; this proved to be the case, and while I frankly had a delightful trip which was individually worth while, I must freely admit, except for the few general impressions noted above, my inability to report anything more definite than that despite the friction that would naturally be expected to exist on account of the debt situation, and the natural resentment that would be expected toward foreign imitators, the French cotton manufacturers and business men generally have only the warmest regard for their American competitors, and certainly seem disposed to go quite as far, and probably further, as I have said before, in affording opportunities for looking around, than would Americans under like circumstances. I will add, however, that were I a Frenchman, I should be less inclined to show Americans through my plant, than as an American I would show a Frenchman through it; because, the Frenchman is not now and never likely to become a competitor of America, on mass production, nor are we likely to go in for the kind of fabrics that the French specialize upon. In other words, they can only lose by our copying their designs, altered for mass production; and we are totally unable to duplicate many kinds of products in which labor cuts so large a figure."

Secures Ford Contract

Contract for delivery of 1,000,000 yards of cloth to the Ford Motor Co., Detroit, Mich., has been secured by the Arkwright (S. C.) Mills. Deliveries will begin immediately. The cloth to be furnished will be put through a rubberizing process by the Ford Motor Co., and then utilized in making tops for automobiles. The amount of money involved in the contract was not announced.

BRISTOL, VA. According to a report, the local Chamber of Commerce has closed negotiations with a company, name temporarily withheld, for the establishment of a local knitting mill. It is said that work on the plant will begin in about a month.

To Probe Open-Price

Activities of Associations Interest Federal Commission

WASHINGTON, D. C.—Declaring that the trade association is a new form of business organization which has presented "many difficult problems" under the anti-trust laws, Attorney General Sargent has advised that the Federal Trade Commission should pursue the investigation of open-price associations directed by resolution of the last Congress.

This and other investigations ordered by Congress have been held up because a provision in the law appropriating the Commission's funds for the current fiscal year stipulated that no part should be expended for investigations requested by either house of Congress except those authorized by concurrent resolution, but that this limitation should not apply to investigations in connection with alleged violations of the anti-trust acts by any corporation. The Commission requested the President last May for a ruling from the Attorney General on what its duties were in the conduct of investigations requested by Congress, as the Commission was in doubt as to whether the resolutions were so worded as to allege a violation of the anti-trust laws by a corporation.

Attorney General Sargent states in an opinion just rendered in response to the request of the Commission that "trade associations, or 'open price' associations probably are corporations within the meaning of the Federal Trade Commission Act, or if not, are composed of corporations. Doubtless their operations, in many important particulars, affect interstate trade and commerce," he said. "The commission in proceeding under the resolution should not extend its investigation to include matters or things not affecting interstate commerce and consequently having no possible bearing upon alleged violations of the anti-trust acts.

"The resolution calls for an investigation which ought to be of value to Congress in considering what legislation, if any, is required to cope with a new form of business organization which, while possessing valuable features, has presented many difficult problems under the Federal Anti-trust Laws," the Attorney General stated. "I am aware that the discussion concerning trade associations has centered about their legality under the anti-trust acts and that such associations have been the subject of four important decisions by the Supreme Court under those laws. I am of opinion, therefore, that the investigation called for by Resolution No. 28 is appropriate to disclose the existence or non-existence of alleged violations of the anti-trust acts by corporations as defined in the fourth section of the Trade Commission Act, and should be made."

WARRENSBURG, N. Y. The Warrensburg Woolen Co., Inc., has started night operations due to increased business demands.

Editors
Charles H. Clark Vernon E. Carroll
Clarence Hutton Douglas G. Woolf

EDITORIAL

We Believe
in the Conservation and Protection
of Domestic Industries

The Ford Textile Experiments

THE authoritative article on the textile experimentation of the Ford Motor Co., published in this issue of TEXTILE WORLD, is of primary interest from a news standpoint since it answers the questions which have been circulating throughout the trade for years and disposes of many varied and ridiculous rumors.

There is however a still greater significance to the situation which this article describes. It reflects the attempt of a man outside the textile industry to approach the prob'ems of textile manufacture with an absolutely open mind and to develop methods without regard to traditionary practice. This is in line with the thought which TEXTILE WORLD and other authorities have been advancing for years — the need of an examination of fundamental textile manufacturing principles by minds unhampered by inhibitions of experience.

It is of course too early to hazard a guess as to the extent to which the Ford experiments will influence textile manufacture in general. This will be decided in the course of years and consequently further Ford developments will be watched for with the greatest interest.

There is one consideration in this connection which should be mentioned. Henry Ford is starting with the handicap of a high wage scale. It is understood that no unskilled operative in his experimental textile plant receives less than $6 per day and that this same minimum would obtain when he gets into commercial production. If he succeeds in overcoming this differential by reduction of labor involved, he will be entitled to all the greater credit.

* * *

Appertaining to Cotton's Price

AMONG the factors that will play an important part in determining the average price of what appears to be the largest crop of American cotton raised since the season of 1914-15, are several that are likely to be overlooked temporarily by those whose attention is riveted too closely upon the economic law of supply and demand. There is general agreement among the latter that the world will consume more cotton this season at the relatively low prices that may be expected than during any of the last three seasons when the average price of all grades and lengths was far above 20 cents, but it is questionable whether they fully appreciate the marked increase in buying power of world consumers since the last season of relatively low cotton prices (1921-22), and the increased demand for low grade short cotton, now available in large quantities well below 20 cents, that seems certain to be forced by the short crop and high price of jute.

It is to an increase in demand for yarns and cloths from the most impoverished peoples of the world that we must look for any marked increase in cotton consumption this season, and it is British and other foreign spinners, whose relatively low manufacturing costs enable them to dominate this class of trade, whose cotton consumption should be expanded thereby. The possible increase may be roughly gauged by the fact that British exports of cotton yarns in 1922 increased about 60,000,000 pounds to 200,000,000 pounds, or the approximate average for pre-war years, and their exports of cloths considerably over a billion yards, although the latter were still about two billion yards below the pre-war average and have been bettered but little since then. Enhanced buying power of this class of consumers plus more normal political and financial conditions throughout the world seem to render conservative an estimated increase in foreign cotton consumption approximately proportionate to that of Great Britain in the calendar year 1922.

For this increase and for the substitution of cotton for a considerable proportion of the higher grades of bagging and other products ordinarily manufactured of jute, it is to be frankly admitted that we must rely upon an ample supply of low grade short cotton at well below 20 cents a pound. The supply of such cotton has been increasing rapidly during the last few weeks, and of untenderable grades alone it is now estimated by some authorities that there is at least 2,000,000 bales, most of which can be bought at 15 cents or less. This is spinnable cotton and if our assumptions are correct every pound of it will be wanted at a price, and if the price is not sufficiently remunerative to growers much of it will never be picked.

The price influence upon the market of so large an amount of low grade and untenderable cotton will be worth careful thought, but until the volume of its supply and demand is better known it will be idle to do more than mention one possible abnormal effect. Assuming that the Government indicated crop as of Oct. 18 of 15,226,000 bales is approximately correct and that some 2,000,000 bales will be untenderable against future contracts, then the crop for hedging and speculative operations upon domestic exchanges will be only 13,226,000 bales. In view of the fact that tenders of actual cotton against futures sales are a ridiculously small percentage of total transactions this feature of the crop may exert little influence until late in the season, and not then if the prior demand for low grades shall have proved active and the end-of-the-season supply is largely of tenderable grade.

Finally, in any attempt to gauge a fair and probable average price of cotton for the season, with demand and supply approximating more closely to pre-war volume than at any time since the world war, it must be remembered that a price for cotton and other commodities that compares with pre-war prices is approximately 100 per cent higher because the supply of gold in the world has doubled. Cotton was one of the first commodities to attain a commercial value upon this post-war basis, and was, of course, aided to this basis by a succession of abnormally small crops. Should this season's crop prove to be largely in excess of the immediate demand a temporary recession from the new normal gold price basis may be expected, but from this temporary decline there will be a tendency to swing back to the new normal average.

* * *

Guaranteeing Color Fastness

THE meeting of the sub-committee on color fastness of the joint committee of converters and finishers, scheduled for Thursday of this week, calls to attention once more this very vital subject of the guaranteeing of fast colors. There are few problems which have greater ramification of interest than does this one. It affects textile manufacturers and finishers, garment manufacturers, wholesalers, retailers and consumers.

There is no doubt that the development of fast color guarantees has been an important textile feature of recent years. It is questionable however whether the abuse of this practice does not more than offset any benefit derived from legitimate labeling. Unless a consumer can be assured that a guarantee means what it says, he will become skeptical of all such representation and the honest manufacturers and distributors will suffer with the dishonest.

Naturally there is a legal side to the question and there is no reason why a body like the Federal Trade Commission should not concern itse'f with this as with other forms of misbranding. Before any such arbitrary standard is established however there are certain technical details which have to be determined and the cooperative work of the finishers and converters through their joint committee, plus the aid of dye manufacturers, should prove to be the right step in this direction.

The most essential question to be decided is the extent to which guarantees can be made honestly. It is a well recognized truth that absolute fastness does not exist and that different colors give varying degrees of fastness to varying agencies. A partial answer would seem to be more definite statement as to the degree and kind of fastness guaranteed. The possibility of such definiteness would naturally depend upon the development of acceptable and practical standards.

The remark of a finisher with many years' experience to a representative of TEXTILE WORLD is pertinent in this connection. He states: "As no one can foresee all the conditions the goods may meet in use or otherwise, I think unqualified guarantees are foolish." That leaves open the question of the extent to which guarantees should be qualified and, as indicated above, the technical nomenclature by which these qualifications may be made intelligible.

The next problem is the extent to which

these guarantees should be backed up so that the consumer will have redress when goods do not measure up to representation — and also that indiscriminate branding may be checked. This is of course largely a merchandising problem and one which the converters should consider very carefully. To quote the same finisher mentioned above, he states: "Our company does not agree to deliver in fast colors anything but what we find to be the best we can procure in the use of carefully selected and tested vat dyes on goods that are all tested under conditions as specified by our trade, from which tests are submitted from each lot put through. All guarantees are the responsibilties of those receiving the goods direct from us and fortunately we have had very little complaint."

It is very evident that the guaranteeing of color fastness has gone too far and that the converters and finishers have tackled a real problem in their attempt to standardize the situation. It is to be hoped that their joint committee will make every effort to achieve definite results promptly so that abuses may be corrected, and consumers, as well as legitimate manufacturers and producers, protected.

Phila. Association Meets

Central Labor Bureau Planned—General Harbord Speaks

Changes in the organization and personnel of the Philadelphia Textile Manufacturers' Association were indicated in an address by Col. Millard D. Brown, chairman of the board, at the annual dinner meeting of the association Oct. 29, at the Manufacturers' Club, Broad & Walnut Sts. He announced that only two of the old employes had been retained and that he felt the new members of the staff under the direction of C. F. Ruddiman, new managing director, will result in more effective organization work. In addition drastic changes in committees representing the various trades, such as knitting, weaving and dyeing and finishing, are being considered, it being deemed advisable to sub-divide different trades more than has been done in the past.

The knitting trade instead of being represented by only one committee will be divided into a group representing full-fashioned hosiery, one for seamless hosiery and others for such trades as knitted fabrics, which will result in more effective service to these respective groups than has been possible in the past. Col. Brown expressed the hope more manufacturers would take advantage of the central employment bureau of the Association, which eventually will be run as a central labor bureau for the entire textile industry in Philadelphia, where applications will be placed on file and when any member requires additional help he may communicate with the bureau and secure immediate service. This procedure will also prove more convenient to those seeking employment in that they will not have to canvass the trade personally. This plan will also be beneficial to mills in outlying sections of the city where fewer applications for work are received.

Plea for Sesqui-Centennial

A plea for increased interest by textile manufacturers in the Sesqui-Centennial Exposition, to be held in Philadelphia in 1926, was made by Chas. J. Webb, president of the Association, who is also chairman of the textile committee of the Sesqui-Centennial Association. He declared the coming exhibit of textiles and style trends would be the most comprehensive ever displayed and asked that manufacturers present give serious consideration to the part they would take in the celebration. Mr. Webb also emphasized that the exposition is a national or international affair rather than a Philadelphia one, this city being selected only because it was the place where the Declaration of Independence was signed.

Major-General Harbord who was in command of the service of supply in France during the war, having more than 600,000 troops under him, made the principal address of the meeting and in his talk which covered his experiences in organizing the supply department of the American Expeditionary Forces, he complimented the Association upon the excellent work done in France by Col. Brown, of the Continental Mills, who organized the supply department for the port of Brest and by Col. Franklin D'Olier, head of Franklin D'Olier & Co., Inc., who, General Harbord said, saved the Government countless millions of dollars by his efficient salvage work during the war, reclaiming articles which had formerly been considered worthless, at Tours, France, where he was in charge of the salvage plant.

Through an invitation extended to them several months ago the foot-ball team of the University of Illinois which played the University of Pennsylvania at Philadelphia on Oct. 31, stayed while in the East at the Manufacturers' Country Club at Oreland, Pa. John Fisler, president of the club and head of Yewdall & Jones Co., and Wm. H. Richardson, were instrumental in having the team quartered at the club.

Mayor of Philadelphia Approves Palace of Fashion Plan

Mayor Kendrick, of Philadelphia, has informed the Textile and Apparel Exhibitors Association, through Chas. J. Webb, of the Textile Committee, that he was enthusiastically back of the plans for the Palace of Fashion as originally outlined for the Sesqui-Centennial and that it should be made a splendid success.

Spring Carpet Opening

Principal Concerns Show Lines and Buyers are Eager

With a large attendance of out-of-town buyers in New York last Monday the spring, 1926, carpet season was opened by leading manufacturers. Early indications were for a good advance business with buyers well satisfied at the opening.

The Alexander Smith & Sons Carpet Co. announced two sets of prices, the first effective on business placed before Dec. 5, 1925 and the second showing advances of 12 to 15% automatically effective on Dec. 15, 1925. The prices are guaranteed to April 1, 1926 and the trade construes this as indicating that there will be no auction at least until that date.

Bigelow-Hartford Carpet Co's. opening was well received. It includes the new Servian seamless rug which buyers commented on favorably. Stephen Sanford & Sons opened at a level said to show reductions of about 7%. New patterns were regarded as unusually attractive. W. & J. Sloane showed Mohawk and Masland lines to an eager attendance of buyers.

The Magee Carpet Co. has priced the "President" wilton velvet on a basis of $37.50 for the 9x12; the "Blue Ribbon" velvet at $27 for 9x12; the "Purple Ribbon" velvet at $20.15.

J. R. Shoaff & Co. opened lines of John Bromley & Sons on Wednesday. George Nichols & Co. offered Fetterolf and Roxbury products on Monday, together with the Paratex rug having wool face and rubber back made by Lamond & Robertson Co. and hooked rugs made by DeForest Products Co. Other houses which have opened include Thomas L. Leedom Co., A. & M. Karaghesian, Artloom Rug Co., Marshall Field & Co., Percy & Anderson, and Hightstown Rug Co.

TEXTILE CALENDAR

Cotton Manufacturers Association of North Carolina, Winter Meeting, Carolina Hotel, Pinehurst, N. C., Nov. 27 and 28, 1925.

American Association of Woolen and Worsted Manufacturers, Annual Meeting and Banquet, Waldorf-Astoria, New York City, Dec. 2, 1925.

Fourth National Exposition of Power and Mechanical Engineering, Grand Central Palace, New York, Nov. 30–Dec. 5, 1925.

Silk Association of America, 54th Annual Dinner, Hotel Astor, New York City, Jan. 9, 1926.

Knitting Arts Exhibition and Annual Convention of National Association of Hosiery & Underwear Manufacturers, Philadelphia, March 22–26, 1926.

International Textile Exposition, Textile Exhibitors Association, Mechanics Hall, Boston, April 12–17, 1926.

National Association of Cotton Manufacturers, Spring Meeting, Boston, Mass., April 13–14, 1926.

Second Chemical Equipment Exposition, under auspices of Association of Chemical Equipment Manufacturers, Cleveland Public Hall, Cleveland, O., May 10–15, 1926.

Second Southern Exposition, Grand Central Palace, New York City, Sept. 26–Oct. 6, 1926.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Nov. 1–6, 1926.

Students Told of Growth of Quality Production in South

RALEIGH, N. C.—William Nelson, who is connected with the Judson Mills, Greenville, S. C., with headquarters in New York City, gave an interesting talk to the students of the North Carolina Textile School recently at a meeting of the Textile Society. Mr. Nelson is a brother of Prof. Nelson of the school.

In his talk, Mr. Nelson emphasized clearly and strongly the fact that there are mills in the southern States which are producing fabrics whose fine qualities are not surpassed by fabrics produced in any other country. In the South, according to Mr. Nelson there are designers and stylers who are able to produce creations equal to those produced in any foreign country.

But, as Mr. Nelson stated, this country instead of taking the lead in the bringing out of new creations often follows the foreign lead because the American public would rather pay a higher price for an imported fabric of the same quality and design as an American made fabric. The people of the United States have not yet realized, said Mr. Nelson, that the fabrics produced in this country are equal to those made in any other country, though their eyes are opening slowly.

In concluding his talk Mr. Nelson told the textile students not to be afraid of starting to work in a mill at the bottom after completing the school course. The man who has the right training and knows how to use the knowledge he has acquired, will not stay in a small place at a low salary for any length of time, Mr. Nelson argued.

Soviet Textile Machinery Purchases

WASHINGTON, D. C.—A synopsis of the official report of the delegation of the Textile Industry of the Soviet Union, covering its trip to England and Germany, has been made public by the Russian Information Bureau.

In England the delegation placed orders for textile machinery valued at $8,750,000, with the option of increasing the amount by $2,060,000. The general terms were as follows: 10% cash with order, 20% in four-month notes dating from the placement of order, 20% upon shipment of the equipment from British ports, and 50% in different payments extending through a period of 20 months.

In Germany the delegation ordered textile equipment worth $1,550,000.

At the time the report was made, at the end of September, negotiations were under way with French firms for the purchase of looms.

CONDENSED TEXTILE ITEMS

Australian Commissioner to Address Wool Manufacturers

Reservations for the annual banquet of the American Association of Woolen and Worsted Manufacturers to be held at the Waldorf-Astoria, New York City, on Wednesday, Dec. 2, 1925, indicate an attendance which may break last year's record attendance of over 600. Entertainment is planned for the banquet which is novel and attractive. It will partake somewhat of the nature of vaudeville.

The annual meeting of the association will be held in the afternoon of Dec. 2. The speaker of the occasion will be Sir James Elder, Australian Commissioner to this country. In view of the importance of the Australian clip and Sir James' familiarity with world wool conditions, an interesting address is assured.

* * *

Says Progress Lags in New England Textile Industry

WASHINGTON, D. C.—The New England textile industry is described as one of the industrial patches where progress lags, in an economic review of the fiscal year 1924-25 by the Department of Commerce.

Taking the nation at large the outstanding features of the year, according to the Department, were: The high rate of production, consumption and exports; high real wages; absence of any consequential unemployment; continued growing efficiency in management and labor; continued expansion in application of scientific discovery, in such fields as electric power and light, the gas engine and radio.

"The standard of living in the country as a whole was the highest in our history, and therefore, the highest in all history," the report declared.

* * *

Progress in Establishing Uniform Wool Grades

WASHINGTON, D. C.—Progress towards establishment of uniform wool grades is reported by Consul A. R. Thomson, at Bradford. Since a conference on Oct. 6 at the British Wool Federation offices further consideration is being given to the proposal by the Federation and representatives of the spinning section of the Bradford trade, Consul Thomson advised in a report to the Department of Commerce.

The conference on Oct. 6 was attended by a subcommittee of the British Federation and by an American delegation, the members of which are George T. Willingmyre, of the Department of Agriculture; M. C. Hobbs, representing American wool manufacturers, and Warren E. Emley, of the Department of Commerce. The Department of Agriculture has not yet received a report from Mr. Willingmyre on the negotiations but it is expected in the near future.

About a year ago the American delegation was supplied with samples of the different Bradford grades from 36s up to 80s and thereafter the Department of Agriculture prepared samples of American wools to correspond as nearly as possible with the Bradford samples in diameter of fibre. Consul Thomson stated in his report that correlation of the samples practically was completed at the conference on Oct. 6.

* * *

American Association Replies to Clothiers' Queries

The executive committee American Association of Woolen and Worsted Manufacturers has drafted a statement to be submitted to the Associated Clothing Manufacturers of New York, Inc., outlining their attitude on a number of problems of interest to both trades, which were discussed at a joint conference by representatives of both associations recently.

The clothiers sought an official statement by the American Association on the following:

1.—The extent to which mills will guarantee colors.

2.—The possibility of establishing a standard for normal shrinkage.

3.—The desirability of including in contracts an approximate width, weight and average yardage of pieces.

4.—Responsilility for examining charges on merchandise which mills accept for return because of poor delivery.

The statement of the executive committee of the American Association in reply follows:

1. You inquire as to how far mills will go in guaranteeing colors:

Mills generally will not guarantee colors, nor can the American Association of Woolen and Worsted Manufacturers recommend that its members do so.

Sellers in preparing their lines offer a wide variety of color and design calculated to reach every phase of taste. The buyer makes his own selection from these offerings, and it is his responsibility to see to it that what he selects is satistactory for the purpose he has in mind.

The seller's responsibility is to deliver what he sells.

2. You ask that a standard for normal shrinkage should be determined upon.

To do this is impossible.

Construction and type of fabric determine shrinkage and no general formula can be set down.

If the wide variety of weave and finish did not so obviously preclude setting a standard for shrinkage, the variety of practice in treating cloth after it is delivered would make it impossible to do so.

3. You ask that contracts covering the sale of cloth should contain information as to the approximate weight, width and average yardage of pieces.

It is our belief that any seller asked to do so will furnish this information.

4. You suggest that the buyer should be relieved of responsibility for paying for the examination of merchandise which mills agree to take back.

The American Association of Woolen and Worsted Manufacturers cannot recommend such an arrangement.

It is the responsibility of the buyer of any commodity to make examination thereof and the expenses thus incurred constitute part of the cost of doing business to the buyer.

* * *

Rainfall Helps Power Situation

Durham, N. C.—Continued rainfall, although small in total amount, is gradually building up a reserve supply in the soil and in the streams, that it is believed will be sufficient before long to make hydro-electric power curtailment unnecessary. The last several days have been generally cloudy with some rain, probably not more than half an inch in the period.

Following these rains the Southern Power Co. has announced the elimination of one-half day of the curtailment program, making two days a week curtailment now instead of two and a half. This schedule will probably be maintained until there is further rainfall.

* * *

Rotterdam's Cotton Trade

WASHINGTON, D. C.—Arrivals of cotton at Rotterdam during September amounted to 12,763 bales, of which 8,512 bales were American and 3,688 bales Indian, according to the Rotterdam Cotton Association's report received by the Department of Commerce. Stocks of raw cotton at Rotterdam on Sept. 30 amounted to 2,584 bales including 1,943 bales of American.

* * *

Plan to Employ Federal Prisoners on Government Supplies

WASHINGTON, D. C.—The Department of Justice is perfecting plans for the employment of Federal prisoners with a view to obtaining authority from Congress for the inauguration of new enterprises enabling the manufacture within the Federal penitentiaries of supplies of various kinds for the different branches of the Government service. In a report from the Superintendent of Prisons to Attorney General Sargent the operation of the cotton duck mill at the Atlanta Penitentiary is emphasized as an illustration of what can be accomplished through the employment of Federal prisoners.

The output of the duck mill during the fiscal year ended June 30 last was more than 3,500,000 yards, valued at $1,665,187. The total cost of maintenance of the institution for the year was $776,651. Under the system of paying the prisoners a bonus of 2c per yard, the earnings of the convicts during the year amounted to $70,000.

* * *

For Better Ginning Methods

WASHINGTON, D. C.—By concerted action the farmers should be able to establish better methods of ginning, maintain pure planting seed and obtain more uniform and better handling of their cotton, thus enabling them to market their crop to better advantage, according to G. S. Meloy, assistant chief marketing specialist of the Bureau of Agricultural Economics. Mr. Meloy now is preparing a bulletin discussing in detail the ginning and handling of cotton in order that the farmer may have knowledge of the best practice.

No other agricultural product is so neglected as American cotton, in Mr. Meloy's opinion, but he believes that it is possible to eliminate a part of the loss accruing to the farmer by bringing to his attention the losses which occur from the time cotton arrives at the gin until it reaches the mill, a large proportion of the expense of which is borne indirectly by him.

In discussing the mechanical processes of ginning, Mr. Meloy remarked that the claims made by the manufacturers of gin machinery lead to confusion, and are so extravagant in some instances that, if fulfilled, would ruin the cotton. Mr. Meloy is preparing as a part of his report an explanation of the function of the several units of ginning machinery in order that the ginner and the farmer may be able to weigh the claims made by competing manufacturers.

CONVEYING THANKS TO MEMBERS OF A. C. M. A.

Ashburnham, Mass.

Editor, TEXTILE WORLD:

I wish to thank through your columns the friends of the American Cotton Manufacturers Association for the beautiful oil painting of Arthur H. Lowe which they presented to Cushing Academy. It will be highly treasured.

H. S. COWELL,
Principal Cushing Academy.

TEXTILE WORLD Cotton and Wool Index Numbers

COTTON INDEX NUMBERS

Date	Cotton	Yarns	Gray Goods	Colored Goods	Aver. for Cloths	Group Average
1914 July 31.....	100	100	100	100	100	100
1919						
January	235	278	280	295	288	279
April	228	221	228	238	233	226
July	283	321	372	292	330	321
October	278	324	387	320	351	337
1920						
January	314	448	464	411	435	427
April	339	531	498	416	455	460
July	327	425	405	423	414	407
October	190	229	248	362	308	282
1921						
January	131	142	176	203	190	175
April	97½	116	138	182	161	147
July	97½	112	133	176	155	141
October	160	179	198	208	203	193
1922						
January	146	168	174	206	191	182
April	144	156	168	209	189	178
July	178	182	190	200	195	189
October	177	192	206	201	203	197
1923						
January	225	225	220	230	225	225
April	231	239	224	242	233	234
July	217	197	190	236	212	211
October	237	222	212	225	219	219
1924						
January	278	241	228	243	236	239
April	220	211	192	194	193	198
July	270	198	186	191	189	196
October	195	196	187	189	188	190
1925						
January	192	197	195	173	184	187
February ...	197	196	195	174	185	187
March	206	202	199	181	190	192
April	196	194	193	180	187	188
May	187	186	185	178	182	183
June	192	179	181	177	179	179
July	197	183	185	176	181	182
August	191	186	188	176	182	183
September ..	189	191	192	174	183	185
October	174	189	193	178	186	186

THE OCTOBER INDEX NUMBERS

Because these index numbers are based upon monthly average prices it is apparent that the October indices for cotton and its products are a very imperfect reflection of current values and trends as influenced by last week's decline in the raw material. As indicating trends, also, they are rendered less reliable than usual by the fact that spot prices are the base of yarn and cloth indices and spot prices of these staples are frequently 5% higher than prices for January and later delivery. Taking the latter prices as the basis of yarn and cloth indices and cotton at 20c the indices as of Oct. 31 were as follows: Cotton, 160; yarns, 179; gray goods, 183; colored goods, 174; group average 178. Compare this with October, 1921, when the cotton index was 160 and it will be seen that current values of yarns and cloths are relatively low.

The advances in wool and top prices established during the last few days of September are fully reflected in the October indices and, with few important exceptions, values have remained stable since then. The advance in the group index is wholly due to the slight rise in wool and tops, yarns continuing barely steady and cloth prices during a between-season's period being largely nominal.

Inquiries regarding interpretation and use of the index numbers may be addressed to TEXTILE WORLD, Statistical Department, 65 Franklin St., Boston, Mass.

WOOL INDEX NUMBERS

Date	Wool	Tops	Yarns	Cloth	Group Average
1914 July 31.....	100	100	100	100	100
1919					
January	272	296	290	237	273
April	242	282	273	237	253
July	269	290	238	237	272
October	286	338	384	240	294
1920					
January	304	335	412	310	336
April	276	334	448	331	352
July	241	258	384	320	315
October	189	213	302	304	276
1921					
January	129	148	186	224	193
April	120	148	177	192	173
July	112	139	172	192	176
October	114	135	162	188	165
1922					
January	128	163	179	182	173
April	165	185	185	184	182
July	189	202	196	188	193
October	199	209	208	191	199
1923					
January	212	225	227	203	213
April	222	230	234	225	228
July	222	223	233	228	227
October	205	213	222	224	220
1924					
January	217	227	221	223	223
April	216	230	223	219	221
July	191	209	212	219	213
October	227	237	224	226	228
1925					
January	264	268	253	228	244
February	259	266	253	231	245
March	241	253	241	236	240
April	219	234	230	241	235
May	196	213	217	241	226
June	204	211	210	241	225
July	216	217	216	239	228
August	217	214	217	234	225
September	213	209	212	229	220
October	216	212	212	229	221

To Develop Malva Fibre

Claim Superiority to Hemp and General Suitability

With world-wide interest manifested in the development and production of new textile fibres, and their possible uses in the production of fabrics of various classes, the announcement of the organization of the Sarmac, Inc., as previously noted in TEXTILE WORLD may be of more than passing importance. This company is located at 2601 N. Hancock Street, Philadelphia, and has been organized for the purpose of handling rayon, tussah, and other fibres which are to be converted for the trade, and also malva. Malva is a fibre producing plant, which grows in South America, India, China, and almost all of the West Indies. A supply of malva is obtained by this company from a large tract of land in Pinar del Rio, in Cuba, in which Dr. Sarmiento is interested.

There are several classes of malva, but the two classes of greatest importance as far as their fibres are concerned are Urena Lobata, Lin. and also Urena Sinuata, Lin. These two classes are considered superior in quality, abundance of fibre, consistency, and wealth of production.

Dr. Sarmiento who is interested in the organization of the Sarmac, Inc., has devoted a number of years to experimentation with this fibre in the process of decortication and degumming, and its preparation for spinning and other textile uses. It was originally hoped to develop this fibre plant into a raw material from which sugar bags could be manufactured in Cuba. As a result of these experiments, Dr. Sarmiento declares the fibre has been found to be really better than hemp, of greater length and strength, also that it can be worked up into a much finer grade with due care, proving to be as fine as the pineapple fibre from which most delicate fabrics are made, rivalling silk in texture.

The fibre has been spun into yarns of various counts and grades, from the coarsest twine up to fine numbers, and has also been woven into fabrics of various construction, showing a remarkably soft texture like silk, and possessing a permanent gloss similar to mercerized fabrics. It has also been dyed and takes the dye evenly.

It is interesting to note that the superiority of malva fibre has long been recognized by many authorities; experiments for more than ninety years have been made in order to produce the fibre for commercial use.

Dr. Sarmiento has developed a process which he states requires only thirty-six hours from the time the malva stick is placed in the first solution until it is separated and ready for drying, obtaining four classes of fibre. From more than 20,000 pounds of malva, it is stated that 2,000 pounds of workable textile fibre are obtained.

It is stated that the Sarmac, Inc., has been organized for the purpose of operating on a commercial basis, using the processes which have been developed by Dr. Sarmiento.

TEXTILE MARKETS IN BRIEF

Cotton Markets: Quotations on gray goods firmer as a result of the strength exhibited by cotton on Monday and Wednesday, but business continues to drag. Readjustment period is certainly not over, and until cotton gives better evidence of having touched the low, forward buying will continue negligible. Fair business from day to day in finished goods. Good business on carded yarns at lower prices, with some numbers held comparatively firm because of scarcity of nearby deliveries.

Wool Markets: Mackinaws and shirtings recently opened for fall, 1926, have been well received. Used in sport shirts and windbreakers these goods have a wider field than the Northwest for distribution this season. Further small advances in spot and nearby men's wear. In women's wear "Lip-stick" red and "Gracklehead" blue are sought in coatings and dress fabrics and command a premium; other lines are quiet. More inquiry from men's wear mills for mixture and gray worsted yarns in ¼ and ⅜s grades.

Knit Goods Markets: Staple seamless hosiery will probably be comparatively quiet during the next two months, so far as actual business is concerned, jobbers' operations being controlled by desire to know more about influence of lower cotton: no general advance yet in seamless silks and silk and rayon mixtures. Opening of southern heavy-weight underwear not expected before Dec. 1, although some mills are taking business for first three months of 1926 on open order. Staple sweater prices for 1926 closely guarded, but average lower than last.

Silk Markets: Situation in silks a trifle more mixed, but undertone is confident. Between-seasons lull pronounced with only moderate sales chiefly to dress houses working on fall and winter resort garments. Retailers out of market. No buying to speak of yet on spring goods and large houses do not expect this to start before end of month. Raw silk has easier tone, but mill activity maintains good pace.

Lancashire Cotton Dividends for Third Quarter

MANCHESTER, ENG.—Sixty Lancashire cotton spinning companies, with a total paid-up ordinary share capital of £6,272,247 and 5,351,312 spindles, paid an average dividend of 6.60% per annum for the three months ended September, absorbing £93,788 against 6.75, 6.67, 5.01 and 3.54 for the four previous quarters.

An average payment of 4.42%, requiring £50,393, was made by 30 concerns for the six months ended September, compared with 4.56 in March and 2.58 in September 1924. The thirty companies have 2,815,788 spindles and a total paid-up ordinary share capital of £5,169,850.

Textile World Analyst

A weekly analysis and forecast by Dr. Lewis H. Haney, Director, New York University Business Research Bureau

NOTE.—The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

SUMMARY — COTTON

1. Although abnormal price uncertainty will exist as long as the Government estimates are coming out, it seems that the maximum crop has been announced and that such a crop is nearly discounted in the market. A small further decline in price is likely, but it will probably be followed by a good recovery.

2. Goods prices are holding better than raw cotton and the prospect is for increased earnings by cotton manufacturers. Price spreads are the most favorable since October, 1922.

3. Slightly lower prices are probable in the near future for yarn and gray goods, but more stable raw cotton will cause increased buying and a stronger market.

Two Factors Fighting for Control

Two great factors are fighting it out for the control of the cotton market. One of these is the large world crop and particularly the great yield now forecast for the United States. The immediate expression of this factor is found in the heavy marketings and hedging pressure of recent weeks. The other great factor is the growing world consumption of cotton and the current general revival of business. The textile industry closely parallels the general business cycle and as it has been unusually depressed for several years the outlook is unusually good. If the exports of raw cotton may be taken as an indication of the world situation this outlook for improvement in cotton textiles is general.

Down to date, however, the supply influence has been the more powerful and during the week ended Oct. 30 cotton prices were driven down about 2⅛c to a point about 6c below the peak of the season. This is the lowest level reached since 1922. ***We think, however, that it will not be long before the second factor becomes more prominent. The early pressure of the crop on the market will become less severe, the present apathy of the mills toward spot cotton will disappear, and prices will recover a part of the ground that has been lost.***

Statistical Position of Raw Cotton

As shown in Fig. 1, the supply position of raw cotton continues to become easier. Estimates on the total world crop continue to indicate an increase of at least 10% over last year. The United States crop estimate has been raised to 15,226,000 bales without linters. Ginnings continue to be extraordinarily large. The last point entered in the graph represents the total number of bales ginned down to Oct. 18, which was 9,519,784, compared with 7,660,820 at the same time last year. In fact the quantity ginned to Oct. 18 this year is almost as great as the ginnings to the end of October in 1924.

The average quantity ginned to Nov. 1 in the last four years has been about 78% of the final crop and during the same period the number of bales ginned to Oct. 18 has averaged 60% of the total. On the basis of these percentages it would be difficult to figure a crop larger than that forecast by the Government. ***During the season it has been apparent that the crop is early, perhaps as much as two weeks ahead of the usual season. This makes it probable that a somewhat larger percentage than usual has already been ginned. If it were not for the Government estimate we would have estimated the crop on the basis of ginning figures at about 14,750,000 bales. In view of the fact that the Government's figures have varied so erratically, we are inclined to consider 14 3/4 million as probably as close to the final yield as the 15 1/4 million put out by the Government.***

Clearly, if the crop is one or two weeks ahead of time, the ginning figures do not necessarily mean a yield of over 15 million bales. The rapid marketing and ginning of the crop to date probably means that a large percentage has already come into sight and that the remaining percentage is thus relatively small.

It is pretty well established that since the middle of October the top crop prospects have been reduced by frosts and insect activity.

It is probable that the tendency of the farmers to hold their remaining cotton will grow increasingly strong. The large quantity marketed at high prices will enable them to do so, and

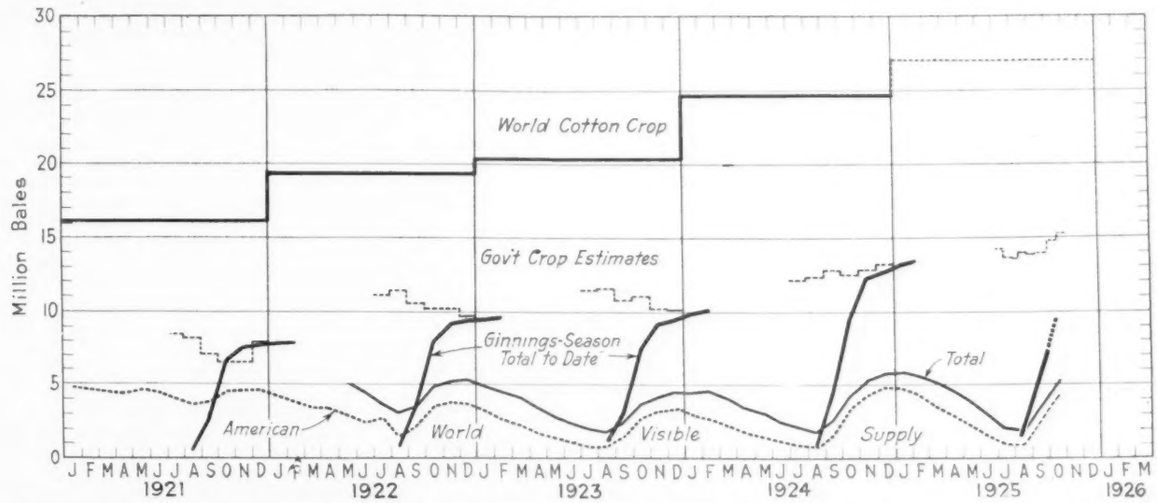

Million Bales
30
25
20
15
10
5
0
World Cotton Crop
Govt Crop Estimates
Ginnings-Season Total to Date
American
World
Visible
Supply
Total
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M
1921
1922
1923
1924
1925
1926

Fig. 1. RAW COTTON SUPPLY—World Cotton Crop (estimated)—(Dept. of Agriculture). Government Crop Estimates—Solid lines for December indicate actual domestic crops (Dept. of Commerce). Ginnings. Cumulative for season to end of month shown. (Dept. of Commerce). World Visible Supply (American and Total), as of the Saturday nearest the end of month (Commercial and Financial Chronicle).

the rapid decline will make them inclined to take that course. This would reduce the pressure on the market.

Finally, ***the grade of the cotton must have been materially reduced as a result of October rains.*** It seems almost certain that there will be a wider spread between the high and low grades, with a large premium on the higher grades.

On the whole, the conclusion seems warranted that the next Government guess at the crop is not likely to be larger than the last one and that the maximum probable supply has been nearly discounted in the market.

As to the demand for cotton it should not be forgotten that as the price decreases, the quantity that will be consumed will tend to increase. There is every indication that the world will demand well over 14 million bales of American cotton. It seems probable that the carryover will be larger than in recent years, but it could be considerably larger without being burdensome.

In this connection it may be noted that our exports to date have been in the neighborhood of 2,186,000 bales against only 1,903,000 bales last year. In September the exports are estimated at 752,000 bales against 737,000 bales in September last year. Moreover, the world spinners' takings of American cotton for the season to date have been nearly 600,000 bales greater than last year. In the last week of October the takings increased to 477,742 bales compared with only 365,787 bales in the same week a year ago.

The immediate effect of the larger crop estimates and the heavy marketings will be that dealers in cotton textiles will expect lower prices on future business. The mills will be able to make somewhat lower prices (though not so much so as might be supposed, since their margins have been unduly low for a long time) and will in part be forced to meet the dealers' expectations. ***But there is no great supply of cotton goods, thanks to the summer curtailment of operations, and good cotton is not going to be so large in supply as might be supposed.***

Ultimately we think the larger crop and lower prices will be a great advantage to the trade. Lower prices will stimulate buying and help in competition with other textiles. At the same time the price of cotton goods will not come down as much as the price of raw cotton, which will tend to allow a reasonable profit for the manufacturer.

It seems reasonable to conclude that a little further reduction in raw cotton will occur in the immediate future, but that before long it will be recognized that the larger crop has been over-discounted and that prices will recover a part of the loss.

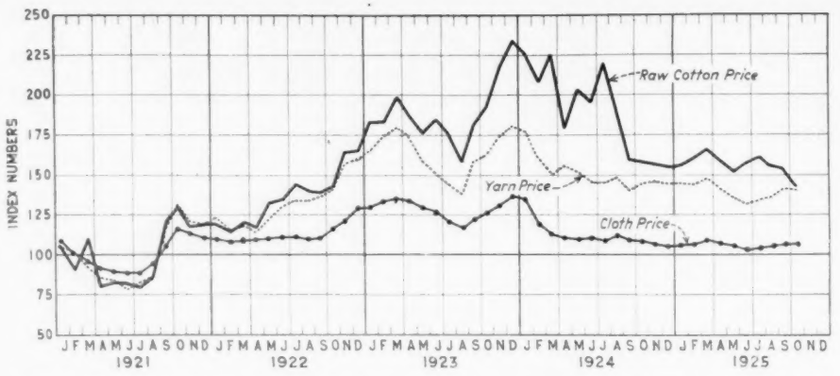

INDEX NUMBERS
250
225
200
175
150
125
100
75
50
Raw Cotton Price
Yarn Price
Cloth Price
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1921
1922
1923
1924
1925

Fig. 2. PRICE SPREADS—Textile World index numbers, adjusted on basis of 1921 avg.= 100.

Manufacturers' Margin the Most Satisfactory in Years

During September the average margin between raw cotton and cotton cloth was the most favorable in months,—somewhat better even than in May. The margin between raw cotton and yarn in September was the largest since the beginning of the year. This tendency, favorable to the manufacturer, made further progress in October. ***As shown in the graph, October brought raw cotton down nearer to a more normal relationship with yarn than has existed at any time since October, 1922.***

As the foregoing statements are based on averages for the month, it is apparent that at the present time the condition described is even more pronounced.

A study of Fig. 2 suggests that it has been found impossible to maintain cloth and yarn prices at much over recent levels and that at last cotton has had to come down to conform to the market for its chief finished products. The raw cotton is now back to a relationship with yarn similar to that of 1922. As regards cloth, both raw cotton and yarn are still fairly high, though the spreads are not far from the average of the last three years.

Manufacturers May Expect Better Demand for Goods and Larger Earnings

The P-V Line, which is shown in Fig. 3, appears to be sagging slightly after the rise from April through July. The downturn, however, is so moderate that nothing more than a slight readjustment in general business is indicated and it should be remembered that this barometer anticipates business by about five months, so that we are still in the period of improving business which it began to forecast in May.

Production in basic industries as reported by the Federal Reserve Board moved upward slightly in September. The increased activity in manufacturing industry was quite pronounced in that month.

The activity of cotton spindles is also shown to have increased, the active hours in September being 92% against 90% in August. This upturn in spindle activity as usual follows the forecast of the P-V Line by about three to five months. It is probable that expansion in cotton manufacturing will continue without interruption through January. This would be indicated by the P-V Line and the connection between cotton manufacturing, and general business is so close that the probability of general business improvement also applies to the former industry. It will be noted that spindle activity is at the lowest level in comparison with the general average of production in basic industries, which creates some presumption that textile activity is due to recover.

Our general conclusion from the situation shown in Fig. 3 is that business will continue to improve for some months, accompanied by a better demand for cotton textiles; that expanding operation and lower raw materials will bring a larger volume and better margins for cotton manufacturers; and that larger consumption of raw cotton will tend to maintain the value of that material.

Cotton Yarn and Gray Goods Likely to Show Further Declines

The yarn barometer (not shown in this issue) indicates slightly less strength ahead in the yarn market and moderately lower prices are probable in the near future. Orders for gray yardage do not show a sufficient gain in trend to keep up with the rising trend of raw cotton consumption by the mills.

Cotton cloth prices have held remarkably well in view of the weakness in the market for raw cotton, and wholesale dry goods sales in September showed more than the usual seasonal gain. We do not expect gray goods to show any large further decrease in price. ***Our goods barometer, however, does indicate less strength in the gray goods market for the remainder of the year.*** In September the billings gained more rapidly than the orders, and, while stocks are not extraordinarily large, a continuation of September trends would soon bring supply to a point where a buyer's market would clearly be indicated.

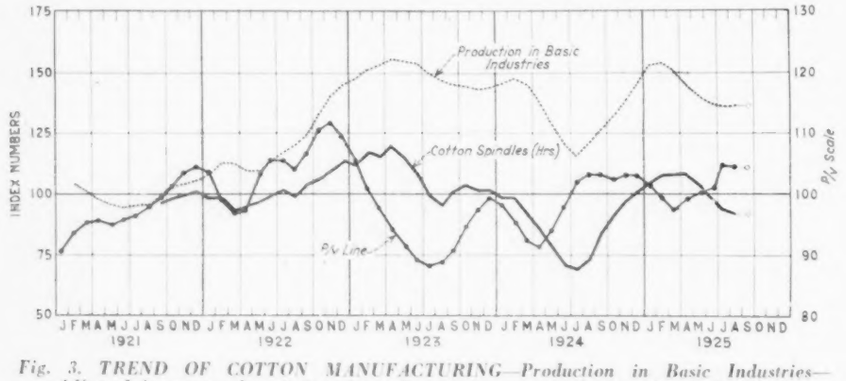


Fig. 3. TREND OF COTTON MANUFACTURING—Production in Basic Industries—Adjusted for seasonal variation, 3-month moving average; 1921 = 100 (Federal Reserve Board). Cotton Spindles (hrs. active)—Three-month moving average; 1921 = 100 (Dept. of Commerce). P-V Line—Ratio of general commodity price index to physical volume of trade (N. Y. University Bureau of Business Research).

THE PERSONAL PAGE

H. Arthur Ligon and W. P. Ligon, sons of the late Dr. H. A. Ligon, have been elected president and vice-president, respectively of the Arcadia (S. C.) Mills. The former has been treasurer of the company for some time. M. E. Reaves has been added to the board of directors, which now includes in addition to Mr. Reaves, R. E. Ligon, D. L. Jennings, Dr. Jesse F. Cleveland, H. A. Ligon, W. P. Ligon, N. B. West and W. S. Manning.

A. F. Jealous, who has just resigned as agent of the Chase Mills of the American Woolen Co., Webster, Mass., has purchased the controlling interest in the Souhegan Woolen Co., Wilton, N. H., of which he will be president. The Souhegan mill will continue the production of men's and women's wear woolens which will be sold as heretofore, through Stoney & Starkey, Inc., New York.

Nelson R. Davis has been elected president of the Haskell Silk Co., Westbrook, to succeed Thomas J. Arnold, of Paterson, N. J., who resigned early this year because of the pressure of other business. Mr. Davis is superintendent of the S. D. Warren Co., of Westbrook, and will continue to hold that position.

Edwin H. Marble, president of the Curtis & Marble Machine Co., Worcester, Mass., and Mrs. Marble, sailed from New York on Oct. 31 on their "second honeymoon trip" to Cuba and the Panama Canal. They celebrated their golden wedding anniversary on Oct. 23.

Alfred Thomas of the Edgeworth Mill division of the M. J. Whittall Associates, Worcester, Mass., and Mrs. Thomas, sailed from New York on Oct. 28 to their home at Frensham Place, Farnham, Surrey, England.

The engagement has been announced of Israel S. Zelkind, owner of the Zelkind Waste Co., Worcester, Mass., and Miss Anne I. Kalish, Brooklyn, N. Y. The wedding will take place in December.

Frederick Rhodes has resigned as treasurer of the Salt's Textile Mfg. Co., Bridgeport, Conn., but will continue as a director, retaining his interest in the company. He is succeeded by Byron A. Fones, of New London, Conn., until recently treasurer of Merritt, Chapman & Scott Wrecking Co.

Three prominent textile manufacturers of Lancashire, England, have been in New Bedford, Mass., lately as the guests of Thomas Gregory, 123 Mt. Pleasant St. The three are Arthur Pickup, of Industry Mill Co., Ltd., Darwin, and president of the Lancashire Cotton Association; William H. Charnley, of the Clitheroe Shirtings Co., Ltd., Clitheroe, and John Rutherford, a magistrate of Blackburn, who is also associated with the Clitheroe Shirtings and Industry Mill companies. The mill situation is gradually improving in England, said Mr. Pickup, with the percentage of unemployment fluctuating. Owing to his official connection with the cotton association, Mr. Pickup did not care to comment further. The three have left for England on the Homeric.

Percy L. Kent, who last Saturday severed his connections with the Potomska Mills Corp., New Bedford, Mass., after a connection of 27 years, the last three of which had been as treasurer and clerk, was remembered by his associates in the office, overseers and second hands, who presented to him a gold watch and chain and gold penknife. Charles E. Brady, of Fall River, who succeeds him, assumed his duties last Monday.

T. T. Gibson, former treasurer of the Puritan Dye & Chemical Co., Northboro, Mass., has accepted a position with the DuPont Rayon Co., Buffalo, N. Y.

Walter D. Larzelere, Philadelphia, with Mrs. Larzelere and their two daughters have sailed for Europe, where they will spend several months traveling. Their daughters will attend school in Cannes, France.

Samuel S. Fleisher, S. B. & B. W. Fleisher, Inc., Philadelphia, will be one of the speakers at the series of lectures to be given by the Young Men's and Young Women's Hebrew Association on Wednesday evenings. Mr. Fleisher will speak on "The Value of Art to the People."

Harry A. Motz, Jr., a member of the firm of Fred Wolstenholme, Philadelphia, has secured a leave of absence from this company and sailed from New York for Miami, Florida, where he expects to remain for several months.

The Welfare Federation of Philadelphia has started their annual drive for funds which will be used to care for the needy in the city during the next year. They will raise more than $3,000,000 before the campaign is closed, more than $1,000,000 being subscribed on the first day. Among those identified with the textile trade, who subscribed large amounts were Fred A. Rakestraw, Hyde-Rakestraw Co., S. M. D. Clapper, Cannon Mills, Inc., and Franklin D'Olier of Franklin D'Olier & Co., Inc., all being received on the first day.

Harry J. Keenly resigned as assistant treasurer and head bookkeeper of the Wampanoag Mills, Fall River, Mass., on Monday to succeed James W. Anthony as treasurer of the American Linen Co., of that city. Mr. Keenly had been with the Wampanoag for the last nine years, going there from the mill to which he returns as treasurer.

A. Raush, formerly associated with the Franklinshire Worsted Mills, 3rd & Westmoreland Sts., Phila., has severed his connection with this company and is now with Geo. C. Hetzel Co., Chester, Pa., as superintendent of the mill.

Fred R. Elston, formerly superintendent of Geo. C. Hetzel Co., Chester, Pa., is no longer connected with this concern, having become superintendent of Franklinshire Worsted Mills, Phila.

J. R. Hunsberger, Hensel Silk Mfg. Co., Philadelphia, has accepted a position as instructor in the Evening Textile School conducted by the Public Schools of that city.

H. S. Birkby is now secretary of the Hollingwood Dye Works, Clayton, N. J. He was formerly connected with the Atlantic Mills, Providence, R. I., where he had charge of the production department. Mr. Birkby is a former student of the Philadelphia Textile School, of the class of 1922.

Gordon A. Birkstresser, of the 1925 graduating class, Philadelphia Textile School, is now connected with the Neversink Dyeing Co., Reading, Pa. He is developing vari-shade dyeing of hosiery at that plant.

It was reported a short time ago that Miss Lucy Fish, daughter of George Fish, general manager of the Fort Mills (S. C.) Mfg. Co., and Paul Ross Moore, of Lancaster, S. C., were married recently. This was an error, the engagement of Miss Fish and Mr. Moore having been announced at about that time.

Robert Blackwood, superintendent of the Chase Mills of the American Woolen Co., Webster, Mass., has been promoted to the position of agent, succeeding A. F. Jealous, resigned. Mr. Blackwood's appointment is in line with the policy of the company to promote whenever possible, from within its own ranks.

F. A. Green, formerly manager of Stephenson & Co., Philadelphia, jobbers, is about to locate in Los Angeles, Cal., as representative of various large eastern mills.

Harold R. Wing has been promoted to manager of the supply sales department of the Crompton & Knowles Loom Works, Worcester, Mass., succeeding in that position the late Homer Gage, Jr., son of the president of the corporation. He had been at the head of the supply distribution department.

Joseph P. Love, Jr., assistant superintendent of the Chase Mills of the American Woolen Co., Webster, Mass., has been promoted to the position of superintendent of that plant.

Alex. Roberts has resigned as superintendent of the Wennonah Cotton Mills Co., Lexington, N. C., to accept a similar position in the Oneida Cotton Mills, Graham, N. C.

Donald B. Osborne, who has held the position as superintendent of the American Textile Dye Works, Milwaukee, Wis., for the last three years, has resigned and will enter other lines of business upon his return from a hunting trip in northern Wisconsin.

A. McDonald has resigned as superintendent of the St. Pauls (N. C.) Cotton Mill Co., Inc.

T. D. Pickell, superintendent of the Cumberland Hosiery Mills, Nashville, Tenn., has resigned that position and on Nov. 15 will assume new duties as resident manager of manufacturing at the Star Hosiery Mills, Spartanburg, S. C.

Leonard Little, general superintendent of the Pacific Mills, Lyman, S. C., has been elected a director of the Lyman Savings Bank, which is being organized to give employes of the mills an opportunity to invest savings and to own stock in the institution. The new bank is capitalized at $10,000.

Clarence J. Abbott, Jr., superintendent of the Holden (Mass.) Textile Co., and Miss Florence Gertrude Mellor, Worcester, Mass., were married in the Mattapoisett (Mass.) Congregational Church on Oct. 30.

R. R. McCuen has been promoted from overseer of carding and spinning to superintendent of the Wennonah Cotton Mills Co., Lexington, N. C.

W. B. Jones, formerly of Loudon, Tenn., has taken a position as superintendent of the Fashion Mill, Athens, Tenn.

J. S. McManus has recently become superintendent of the St. Pauls (N. C.) Cotton Mill Co., Inc.

Fred P. Keller, superintendent for Stunzi Sons Silk Co., Inc., West Reading, Pa., for the last eight years, severed his connections with that company on Oct. 28 and affiliated himself with D. I. & C. H. Stern, Inc., New York. Before leaving, Mr. Keller was tendered a farewell dinner and presented with a brief case and fountain pen by employes of the mill.

Morris Ackman, superintendent of the Worcester (Mass.) Knitting Co., and Miss Sadie I. Pemstein, also of that city, are to be married in St. Mark's Hall, New York, on Thanksgiving Day.

A. W. Roper has been promoted from day overseer of carding to night superintendent of the Perkins Hosiery Mills, Columbus, Ga.

Albert McDowell, who was overseer of the cloth room of the Exeter (N. H.) Mfg. Co. for a number of years, resigned recently to accept the position of assistant superintendent of the bleachery of the Ware Shoals (S. C.) Mfg. Co. Mr. McDowell's brother is superintendent of the bleachery.

M. Seigerer is now superintendent of the axminister weaving department of the plant of Stephen Sanford & Sons, Inc., Amsterdam, N. Y.

J. F. Wright, superintendent of Mill No. 6 of the Marlboro Cotton Mills, McColl, S. C., has been made superintendent of Mill No. 3 also.

William Irving has accepted the position as overseer of finishing for the Chambersburg, Pa., Woolen Mills, Inc. Mr. Irving comes from Lincoln, Maine.

D. L. Jones has been promoted from night overseer to day overseer of weaving in the Hermitage Cotton Mills, Camden, S. C.

Elgin Niles, for three years overseer in the card room of the Renfrew Mfg. Co., Adams, Mass., has resigned to accept a position elsewhere.

W. B. Milholland has taken a position as overseer of carding for the Industrial Cotton Mills Co., Inc., Rock Hill, S. C.

G. C. Davis has taken a position as

The Personal Page—Continued

night overseer of weaving in the Hermitage Cotton Mills, Camden, S. C.

J. T. White, formerly of Lanette, Ala., is now overseer of slashing at the Lancaster (S. C.) Cotton Mills.

Ernest L. Hilton has resigned his position as foreman in the foundry of the Draper Corp., Hopedale, Mass., and gone to Florida to live.

Neal R. Richardson, a foreman in Department 43 of the Draper Corp., Hopedale, Mass., has resigned and gone to Florida to live. He was presented with a gold watch by his associates on his retirement on October 19. He was for many years yard foreman for the corporation.

L. L. Loning is now overseer of carding in Mills No. 1 and 2 of the Wennonah Cotton Mills Co., Lexington, N. C. He was promoted to this position from that of second hand.

E. W. Netherland, overseer of spinning in the Perkins Hosiery Mills, Columbus, Ga., has been placed in charge of carding also.

J. T. Jones, formerly overseer of carding in Mills No. 1 and 2 of the Marlboro Cotton Mills, McColl, S. C., is now connected in a similar capacity with the Morgan Cotton Mills, Inc., Laurel Hill, N. C.

R. M. Hughes has resigned his position with the F. W. Poe Mfg. Co., Greenville, S. C., to become overseer of weaving at the Lydia Cotton Mills, Clinton, S. C.

E. M. Dees is now overseer of carding for the Osage Mfg. Co., Bessemer City, N. C. He was formerly with the Phenix Mills Co., Kings Mountain, N. C.

J. L. Nelson has resigned as overseer of weaving in the McKintex Dept. of the C. R. Miller Mfg. Co., McKinney, Tex., to accept a similar position in the Pioneer Cotton Mills, Guthrie, Okla.

John F. Macqueny has succeeded Fred L. Owens as overseer of dyeing at the Cordis Mills, Milbury, Mass. He comes from Three Rivers, Mass., where Mr. Owens has gone.

W. V. Jones has resigned as overseer of winding, warping and finishing for the Norcott Mills Co., Concord, N. C., to accept a position as overseer of carding and spinning with the Anchor Mills Co., Huntersville, N. C.

C. C. Kiser, formerly with the Industrial Cotton Mills Co., Rock Hill, S. C., is now overseer of night carding and spinning for the Cannon Mfg. Co., Kannapolis, N. C.

Blake Crouse has been promoted from second hand to overseer of No. 1 and 2 spinning at the Wennonah Cotton Mills Co., Lexington, N. C.

A. W. Richardson, overseer of weaving at the Oneida Cotton Mills, Graham, N. C., has resigned that position.

Albert E. Ellett, an overseer for the Potter Knitting Co. Springfield, Mass., has resigned to accept a similar position with the Thomas Dalby Co., Watertown, Mass.

W. T. Prince, second hand in weaving for the Victor-Monaghan Co., Greer, S. C. resigned recently to become overseer of weaving in the crash division of the Tucapau (S. C.) Mills.

Henry Johnfield, formerly employed for the Auburn (N. Y.) Woolen Co., has recently become overseer of carding in the plant of the Holden (Mass.) Textile Co.

J. W. Mosey, formerly a second hand, is now overseer of weaving in the Oneida Cotton Mills, Graham, N. C.

R. A. Littlejohn has resigned as overseer of weaving in the Lydia Cotton Mills, Clinton, S. C.

Coy Thornton, second hand in day twisting at the Loray Division of the Manville Jenckes Co., Gastonia, N. C., has been promoted to overseer of night twisting.

S. L. Wallace has succeeded Claude Spence in the position of master mechanic at the Arcade Cotton Mills, Rock Hill, S. C.

G. L. Horton now holds the position of master mechanic at the Aragon-Baldwin Cotton Mills, Rock Hill, S. C. He was promoted to this position.

Joseph E. Graham has taken the position as overseer of finishing for the Tilton Mills, American Woolen Co., Tilton, N. H. Mr. Graham was formerly employed at Lebanon, N. H.

O. G. Holley, formerly overseer of the cloth room of the Adams Duck Mills, Inc., Macon, Ga., has taken a similar position in the Pelham (Ga.) Division of the Consolidated Textile Corp.

Richard A. Magner has taken the position as overseer of dyeing for the Uswoco Mills, U. S. Worsted Co., Lawrence, Mass. Mr. Magner comes from Millbury, Mass.

Fred Greenwood has taken the position as overseer of dyeing for the American Textile Dye Works, Milwaukee, Wis. Mr. Greenwood comes from Westerly, R. I.

R. W. Thompson has resigned as overseer of the cloth room at the Exposition Cotton Mills, Atlanta, Ga.

D. Clark has resigned as overseer of the card room of the Columbus, (Ga.) Mfg. Co.

C. W. Gibson has resigned as overseer of the cloth room of the Swift Mfg. Co., Columbus, Ga., to accept a similar position with the Exposition Cotton Mills, Atlanta.

Howard Norton has taken the position as overseer of cloth room for the Lyman Mills, Holyoke, Mass.

E. B. Brannon has recently become general overseer of spinning, spooling, warping, reeling and winding for the Spindale (N. C.) Mills Co.

Frank J. Durkan has taken the position as overseer of weaving for the Intervale Mills, Quinebaug, Conn. Mr. Durkan has been overseer of weaving in some of the best mills in New England and a number of mills in the middle Atlantic States.

Peter F. Roach has succeeded Herbert Pemberton as overseer of weaving at the Fisher Mfg. Co., Fisherville, Mass. He comes from Fall River, Mass.

W. D. Sparks, formerly overseer of carding at the Gluck Mills, Anderson, S. C., is now superintendent of the plant of the Bowen-Crews Co., Athens, Ga.

H. L. Cooksey, overseer of the cloth room at Mill No. 4 of the Chadwick-Hoskins Co., Charlotte, N. C., has resigned to accept the position as assistant cloth room overseer at the Lancaster (S. C.) Cotton Mills.

D. J. Autry, overseer of carding for the Rex Spinning Co., Ranlo, N. C., has resigned that position.

Louis J. Sawyer of Auburn, N. Y., has succeeded Frank Christian as overseer of finishing at the Smith Mills, Inc., Milford, Mass.

W. N. Pate is now night overseer of carding for the Pomona Mills, Inc., Greensboro, N. C.

J. S. Crow, overseer of weaving at night at the Greenwood (S. C.) Cotton Mills, has been transferred to the day shift. J. W. Derrick, second hand of weaving at night, has been promoted to night overseer of weaving.

T. C. Beagle is now overseer of dyeing at the Pryor Hosiery Mills, Inc., Jasper, Tenn.

N. C. Green has taken a position as overseer of carding with the Rex Spinning Co., Ranlo, N. C.

J. J. Grayson, overseer of carding at the Rankin Mills, Inc., Gastonia, N. C., has resigned that position.

M. H. McLendon of the Loray Division of the Manville-Jenckes Co., Gastonia, N. C., has been appointed overseer of spinning for the High Shoals (N. C.) Mills of that company.

J. F. Thomas, night overseer of spinning for the Rex Spinning Co., Ranlo, N. C., has resigned.

J. A. Adams has recently become overseer of carding for the Opelika (Ala.) Mfg. Co.

J. P. Inglett, who has been overseer of carding at the Buck Creek Cotton Mills, Siluria, Ala., has resigned to accept a similar position with the Danville Knitting Mills, Bon Air, Ala.

J. E. Campbell has returned to the Rankin Mills, Inc., Gastonia, N. C., as overseer of carding.

Frederick Teschemacher, assistant boss dyer of the Real Silk Hosiery Mills, Indianapolis, Ind., has received numerous expressions of deep sympathy from his friends in the industry upon news of the loss of his two sons, William and Frederick, Jr., who were members of the crew of the ill fated submarine S-51, which was rammed and sunk off the New England coast. The two young men were twin brothers.

H. V. Carver has been promoted from second hand to night overseer of No. 4 weaving at the Loray plant of the Manville-Jenckes Co., Gastonia, N. C.

George Warfield has succeeded the late Charles H. Cove as master mechanic of the Warren Cotton Mills of the Thorndike Co., West Warren, Mass. He comes from Thorndike, Mass.

Andrew James Peterson has concluded his duties as master mechanic of the Anco Finishing Corp., Wilkinsonville, Mass., and accepted a similar position at Fiskdale, Mass.

Charles G. Dana has accepted a position as master mechanic at the Anco Finishing Corp., Wilkinsonville, Mass. He comes from Webster, Mass.

F. J. Smith, formerly of Pendleton, S. C., is now second hand in carding in Mill No. 5 of the Chadwick-Hoskins Co., Pineville, N. C.

W. C. Bearden has been promoted to the position of second hand in carding at the Lincoln Mills of Alabama, in Huntsville.

E. C. Wynn, second hand in carding with the Lincoln Mills of Alabama, in Huntsville, has resigned that position.

L. E. Britt, of Clearwater, S. C., has been appointed second hand in spinning at the Baldwin Plant, of the Aragon-Baldwin Cotton Mills, Inc., Chester, S. C.

Z. J. Boyono has recently become assistant overseer of spinning and a loom fixer in the mill of the Warrenton Woolen Co., Torrington, Conn.

Arthur Duworth has recently become a second hand in the cloth room of the Dartmouth Mfg. Co., New Bedford, Mass.

Stewart Ferrell has been appointed second hand in the spinning room at the Eureka Cotton Mill, Chester, S. C.

G. W. Carne now holds the position of second hand in weaving at the Lincoln Mills of Alabama, in Huntsville.

T. Fields, second hand in carding in the Knoxville (Tenn.) Cotton Mills, has resigned that position.

Otis Lucas is now second hand in twisting Room No. 2, of the Winnsboro (S. C.) Mills. He was promoted to this position.

M. E. Maxwell is now second hand in carding at the Buck Creek Cotton Mills, Siluria, Ala. He was promoted to this position.

Joseph Legassey, second hand in the spinning department of the Fisher Mfg. Co., Fisherville, Mass., for many years, has resigned to accept a position with the Lawton Spinning Co., Woonsocket, R. I.

E. Livingston has been appointed second hand in weaving at Mill No. 1 of the Aragon-Baldwin Cotton Mills, Inc., Chester, S. C.

J. B. Boynton is now second hand in spinning at the Borden Mills, Inc., Kingsport, Tenn. He was formerly overseer of spinning at the American Cotton Mills, Inc., Bessemer City, N. C.

J. N. Bryant has resigned as loom fixer at the Draper-American Mill, Draper, N. C.

S. J. Wilson has been promoted to the position of night overseer of carding in the Caswell Cotton Mills, Inc., Kingston, N. C.

W. McAbee, overseer of the cloth room of the Fort Mill (S. C.) Mfg. Co., has resigned and gone to Anderson, S. C.

POWER AND ENGINEERING SECTION

The Induction Motor Problem — Controls

Necessity for Motor Controls, and the Various Purposes They Serve—Starting and Protecting Large and Small Motors by Hand and Automatic Operation—Important Differences in the Various Types of Control Apparatus—Special Requirements of Textile Machinery

By Miles Sampson

THE first article in this series (TEXTILE WORLD, Sept. 5, 1925) was devoted to induction motors, the characteristics of various types, efficiencies, power factor, ratings, and to the considerations which should lead to the standardization of motor purchases in all possible cases. This second article attempts to cover a similar field for motor controls. What functions must the starting and stopping devices have? What type of protective apparatus is justified for particular cases and for specialized textile manufacturing processes? How far can one economically go in the protection of motor equipment?

Necessary Control Functions

The necessity for control apparatus arises because one source of electrical energy serves many users of it. If one generator served one motor in all cases, no need for control, except of the prime mover, would exist. The term control is here used to denote the device or devices serving one or more of the following main purposes:

(a) Starting and stopping the motor, either directly or by remote control.

(b) Protecting the motor against injury arising from low voltage or no voltage.

(c) Protecting the motor from injury due to overload.

(d) Controlling the speed of the motor if the latter is designed for such service.

(e) Providing means for indicating or for easily testing the load being carried by the motor.

(f) Providing easy means of disconnecting the motor from the supply lines for removal or repair.

The application of these general principles varies greatly with conditions. A starting and stopping device suitable for a ⅓ H. P. loom motor is entirely unsuited, even in type, for controlling a 20 H. P. motor driving spinning frames. A group drive motor of, say, 100 H. P. on a small mill power plant may need quite different controls than if installed in a large mill on central station service. Overload protection, too, may be of quite different sorts, depending on the motor size and load conditions.

Hand Operated Switching

Let us first consider simply the switching gear by which starting and stopping are accomplished. We shall neglect for the moment all the other auxiliary and protective functions this gear usually performs. As already intimated, this is almost entirely a matter of size of motor though the load to be started and the system supplying the motor enter into the question.

Motor controls serve many purposes; e. g., starting and stopping, overload and no-voltage protection, adjustment of speed, indication and test of load carried. These necessary functions vary greatly with the motor size, with the character of the load, and with the size of the system. Starting devices of the hand-operated switch type are simplest and cheapest, but cannot accomplish both overload and under-voltage protection as satisfactorily as small circuit breakers or magnetic switches. Due to their inherently large starting current, large motors are usually started by compensators, which reduce the voltage impressed, and greatly lower the current required. These may be hand-operated or automatic, but are always equipped with full protective devices. Controls should not only protect motors, they should protect operatives and repair men—they should be safe to use. Controls for definite textile applications should be specified on logical principles based on an analysis of the conditions.

The very smallest motors are thrown directly on the line; that is, connected to the power mains by means of proper switches. Textile applications are particularly individual loom motors and other fractional horsepower drives. The switches are usually of the heavy snap switch type operated by hand. They are inherently short-lived if the loaded motor must be frequently stopped by their use, for the arc occurring when the heavily loaded circuit is broken will soon ruin the contacts. However, as installed on looms, friction clutches assure continuous motor operation, the motor is running light when stopped, and results are entirely satisfactory.

The plain knife switch, hand-controlled, was formerly used for slightly heavier work. It was, however, open to the above objection, and offered no protective features except those obtainable by fuses, whose limitations will be later discussed. Hence, for such work (individual spinning frame drives) more substantial apparatus is now used and the circuit is made and broken under oil. Thus the switch becomes an oil circuit breaker in embryo, the life of the switch contacts is greatly increased, and desirable protective features made possible.

Why do these methods, so common and taken-for-granted in starting small motors, become impractical as the motor sizes increase? Because of the inherently large starting current of the squirrel cage motor, which reaches 200% and more of the full load current. Two or three large-sized motors started at once might easily create currents of a thousand amperes. Regulation would certainly suffer, and even main circuit breakers tripped by such a current rush.

Many power companies, therefore, have rules limiting the size of motors which are allowed to be thrown directly on the line. Conservative practice seems to set this limit at 25 H.P., though some might set it considerably lower. How, then, shall the larger motors be satisfactorily started? By transforming down the voltage impressed on the motor during starting, which reduces in still greater proportion the starting current required. For instance, if only 70% of normal voltage need be impressed on the motor to start the connected load, possibly 50% of the full voltage starting current will be required.

The modern compensator, therefore, has this for its first function, and the choice of three or four reduced starting voltages is usually provided. A starting voltage of 50% of normal, for instance, may be sufficient where the starting torque required is small. The running position of the contacts merely connects the motor direct to the line after it is up to speed.

These starting operations were originally performed manually by an operating handle conveniently placed, and many thousands of this type have been and are being sold. The demand for remote control of motors has, however, grown so tremendously that the magnetic switch and automatic starting compensator are coming into very general use.

Automatic Switching

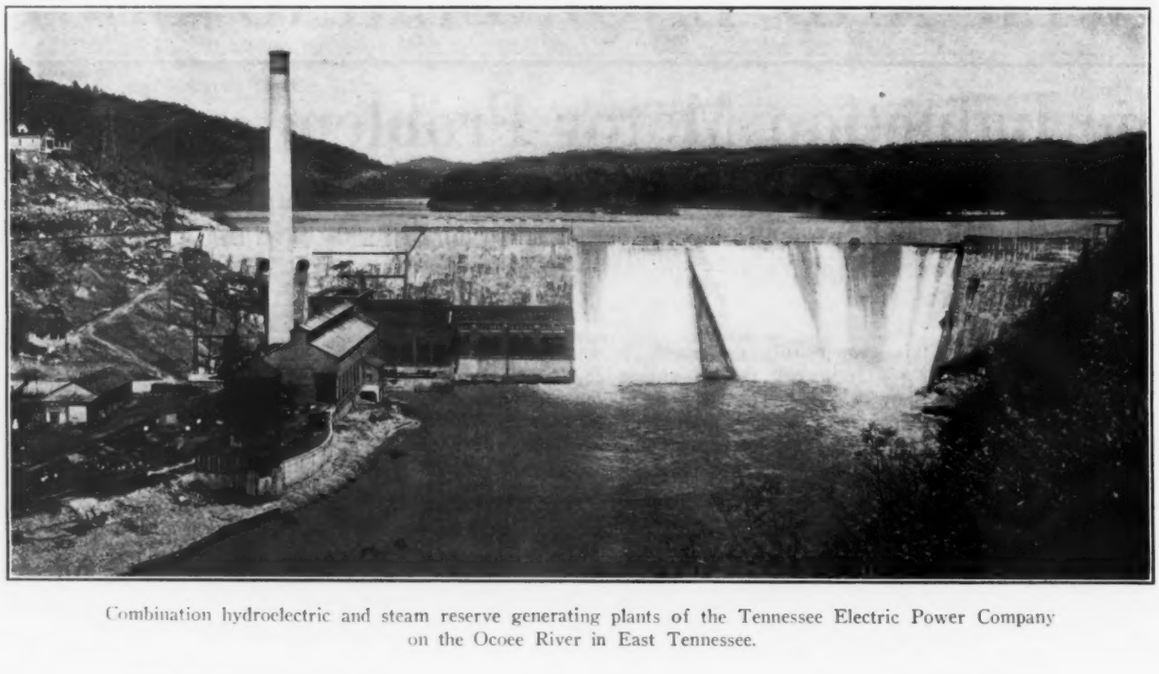
The former does the work of the snap or knife switch, and combines with their functions some protective features to be later described. The contact mechanism is operated by a magnet, which is energized and closes the switch whenever the control circuit is closed. This may be done by a hand push-button, pressure governor, float switch, or by any one of a number of such devices at any reasonable distance from the motor.

The automatic compensator should usually be specified for remote control of motors too large to be connected directly to the lines by a magnetic switch. It is operated by current flowing in a control circuit which automatically and electrically performs the duty of connecting the motor to starting contacts at reduced voltage and then to running contacts at full voltage. The control circuit may be actuated by any of the methods above mentioned.

Taps are provided, as in the hand compensator, to adjust the starting voltage to its load. The time of shifting from starting to running contacts is definitely controlled by relays operating on the "definite-time-interval" principle or on the "definite-current" idea. In the former, the shift occurs at a definite time after the starting contact is made; in the latter, when the starting current has fallen to a predetermined value. Both types require certain interlocks and safety devices built into the apparatus.

What particular conditions or advantages justify the additional expense for automatic equipment? Motors mounted on the ceiling can be most easily controlled in this way with their switches close by, and only low voltage control wiring run to the machines. For such work as keeping tanks in out of the way places full (or empty), full automatic equipment is well nigh indispensable. They also embody desirable safety features.

However, the real, sound, economic basis for their use is the fact that the motor starting is always properly



Combination hydroelectric and steam reserve generating plants of the Tennessee Electric Power Company on the Ocoee River in East Tennessee.

Continuous Power Service in Spite of the Drought

Not a single customer of The Tennessee Electric Power Company in the textile industry, or any other industry, found it necessary to curtail operations during the unprecedented drought which recently prevailed in the South.

The wisdom and foresight exhibited by the management of The Tennessee Electric Power Company in the development of its properties—providing adequate steam reserve plants to supplement the output of its hydroelectric stations in times of need—enabled this company to maintain its own record and that of its predecessors in **never curtailing or suspending service to any customer**

The picture shows one of the combination hydroelectric and steam plants operated by the company. Altogether this power system comprises four large water and four large steam plants, totaling 265,180 horsepower, which furnish electricity to industries in 125 cities and towns of Middle and East Tennessee.

Ample, dependable electric power, regardless of conditions, is thus assured to all manufacturers locating in this section. Write us for information about Tennessee.

The Tennessee Electric Power Co., Chattanooga, Tenn.

What Tennessee Offers

1. The best labor conditions in the South.
2. Ideal climate the year 'round.
3. Cotton from Tennessee and adjoining states.
4. Satisfactory transportation facilities.
5. Location in the center of Southern markets, and within easy access of others.
6. Favorable construction conditions—land, material costs, taxes.
7. Adequate banking facilities.
8. Cheap power with the supply well in advance of requirements.

Build Your Mill in TENNESSEE

done. They put an end to half-made contacts, to throwing in the running contacts too soon or too late, and such possibilities of motor damage. They simplify the important problem of starting squirrel cage motors so that trained labor is not necessary for the purpose.

Protection of Small Motors

As was shown in a previous article, the investment in motors is a heavy one, running roughly from $10 to $20 per horsepower for the bare motors. The control apparatus must do more than start and stop them; it must protect them from (a) the dangers due to low voltage or loss of voltage, (b) the dangers due to overload, (c) the dangers of single phase operation (of polyphase motors).

Overloads result in increased currents flowing, and if long continued, the heating becomes dangerous and breakdown occurs. Since the heat increase always accompanies the overload, it was natural that devices actuated by the heat should form the first protective apparatus. The result was the fuse to open the circuit in which excessive current flowed through the melting of a soft metal link.

This simple form, though still much used, has several undesirable characteristics for motor overload protection. A fuse which will carry the 200% or more starting current will be entirely too large for proper running protection. Vice versa, one which is of proper size for running will blow on starting, and this is annoying and expensive. Fuses of excessive ratings can be easily substituted, to the detriment of protection.

Two methods are used to overcome these objections for motors which are to be thrown directly on the line. One consists in a type of double throw switch which starts the motor without the fuses in circuit, and in the second position cuts in the running fuses. It sacrifices protection at the instant of starting. The other method consists in a re-design of the fuse, and the introduction of a heating coil which delays the time of blowing. The fuse thus passes the heavy but momentary starting current, but blows under smaller overload currents of longer duration. This cutout naturally does not protect against short circuit, and the regular branch fuses or circuit breaker must not be omitted.

Both of these devices are now of standard manufacture and widely used. They should be specified where hand starters for small motors are to be employed. One or the other, with fuses carefully specified to match the motor current under normal load, will open the motor circuit when for any reason the motor operates single phase.

The possibility of voltage failure presents some few problems to the small motor user. If voltage does fail, the motor naturally stops. If not then disconnected from the line, it attempts to start when the voltage returns. One of two things happens. If the fuses are of the excessive rating necessary to start the motor, it will start without accident, the effect being that of closing a switch. If the fuses are of normal rating based on the running current, they will blow. The former situation sacrifices protection; the latter is annoying and expensive.

Complete Protection Advisable

The normally increasing loads and overloads incidental to prosperity and business expansion with its accompanying motor failures, naturally emphasize the need for greater motor protection. There is a certain lost-time value and lost-production value, besides an actual money expense, in the replacement or repair of a motor failure due to a lack of possible protective apparatus. One such case will usually cost several times what the protection itself would have cost. Hence, the starting equipment having both protective features has been deservedly growing in popularity.

The small circuit breaker is an example of this type. It is operated by hand, either direct or through a shipper rod attachment, as is common on spinning or roving frame drives. Overload protection is usually of the thermal cutout type, though the more expensive relays may be used. It is combined with a low-voltage release. The switch arm is held in running position by magnets and is released by them when the current goes below a certain figure due to loss of voltage. A spring then returns the arm to the "off" position, and the motor must be again started when voltage is restored. The principle is a common one and is used not only in this type of small circuit breaker, but in the larger hand and automatic compensators.

The small magnetic switch is also well adapted to the application of these protective devices. The actual motive power closing and holding the contacts is an energized magnet. When voltage fails or lowers, the energy is not sufficient to maintain the contact, the circuit is broken by a spring, and the starting operations must be performed again when voltage is restored. Cutouts of the thermal type usually provide the overload protection.

Protection of Larger Motors

For larger motors, the under-voltage protection on both the hand and automatic compensator is usually of the type just described for the smaller units, a holding magnet retaining the switch in contact as long as energized. The overload protection is more elaborate, the thermal cutout not being suitable for the purpose. Overload relays are employed which break the low voltage holding magnet circuit and stop the motor. The many makes and sizes of both styles of compensators, though much different in outside appearance, will generally be found upon analysis to embody these two protective principles. Such compensators cost considerable money and are of some complexity. The necessary stock of repair parts to insure continuous operation may therefore be quite large. Due to the continual progress in the development of these types, standardization on type, make, and fewest practicable sizes will often be interfered with.

Worthwhile improvements may be expected to appear and render obsolete equipment which is still serviceable. It is never safe to assume the ultimate has been reached. The executive who is always first to try the new will doubtless waste some money, but the one who is last will lose the advantages which the trial and proving of new ideas always brings.

Many factors are constantly contributing to the steady progress being made in the safety of control apparatus. This progress is truly amazing when one thinks of the apparatus which passed for "controls" in years gone by. The National Electric Code, the insurance companies, the state factory laws, and the ever-present spur of competition, are all working in the direction of greater safety. This is yet another field where it is very unwise to assume the "final" and "best" has been reached.

Consider, for instance, the mere matter of replacement of fuses, always a potential source of danger where there is any possibility of a live circuit. The writer remembers an experience with one device designed to make this work easy and safe. Yet in actual service it failed and its use was discontinued because a number of workmen were burned.

The well-managed plant will not, therefore, purchase apparatus involving the use of fuses except the design provides for a positive dead circuit before the fuses can be changed. Nothing less than full protection on this important point should be considered. Magnetic switches, automatic compensators and other forms of remote control contribute to safety in addition to their other advantages. The removal of the motor and the current carrying apparatus from the vicinity of the operatives, and the substitution of, say, a push button station on a low voltage circuit, is a distinct gain to safety. Safety interlocks also contribute to this end.

Controls should, therefore, not only protect the motors served, they should protect operatives and repair men from injury with reasonable care on their part. Costing somewhat more, the responsible purchaser should always bear in mind the possible cost of accidents caused through unsafe apparatus.

Specific Textile Applications

When one or more choices of types of control are possible, other factors must be considered. For instance, an individual picker motor is started and stopped comparatively few times a day. The result is that no serious objection on the score of ease of operation can be offered to the manually operated or push button type of starter, though both are localized propositions. Control from more than one point may be considered non-essential.

The same is true of cards and drawing frames, whether individually or group driven. Four-frame drives of any type have no serious need of motor control from more than one point, though with ceiling hung motors, remote control through magnetic switches will be found very convenient.

The case is quite different with individually driven roving frames. Several convenient points of control are quite essential because of the length of the machine, the necessary travel of the operator, and the frequent starting and stopping. This is usually accomplished on old frames by

Power Data Sheets

By F. S. Root

POWER REQUIRED TO OPERATE BALING PRESSES — 1

TEST "A"

TYPE OF PRESSES

Two(2) Dedrick Columbia Parallel Joint Presses, Capacity of each Press 450 pounds of Cotton Card Waste

MOTOR 10 H.P. 1200 R.P.M. 550 Volts, 3 Phase, 60 Cycles. Belted to a double countershaft driving both presses.

Motor, Shafting + Loose pulleys, 1.85 H.P.
Gross H.P. Input to Motor (ONE PRESS)
Start of Squeeze 2.5 H.P.
Middle " " 4.0 "
End " " 5.35

NOTES.

Test was made on only one Press, as the other was out of order. Probable load on motor, with both presses on full squeeze, 9.0 Horsepower Input.

Load on this motor is very intermittent as time between forming bales was about 20 minutes, also presses seldom are on maximum squeeze at the same moment.

POWER REQUIRED TO OPERATE COTTON MILL FREIGHT ELEVATORS. — 2

MOTOR 7½ H.P. 1200 R.P.M., 550 Volts, 3 Phase, 60 Cycles

DRIVE. Motor Belted direct to Elevator Counter-shaft, Motor controlled by rope-operated limit-switch.

TEST DATA

Motor and Elevator Countershaft ___ 1.34 H.P.
Elevator going down with no deck load 1.50 "
Down with 600 lb load _ 1.40 "
Up with 600 lbs load _ 4.50 "
Speed of Elevator, taken when going up, 1.6 ft per sec.

TEST "B"

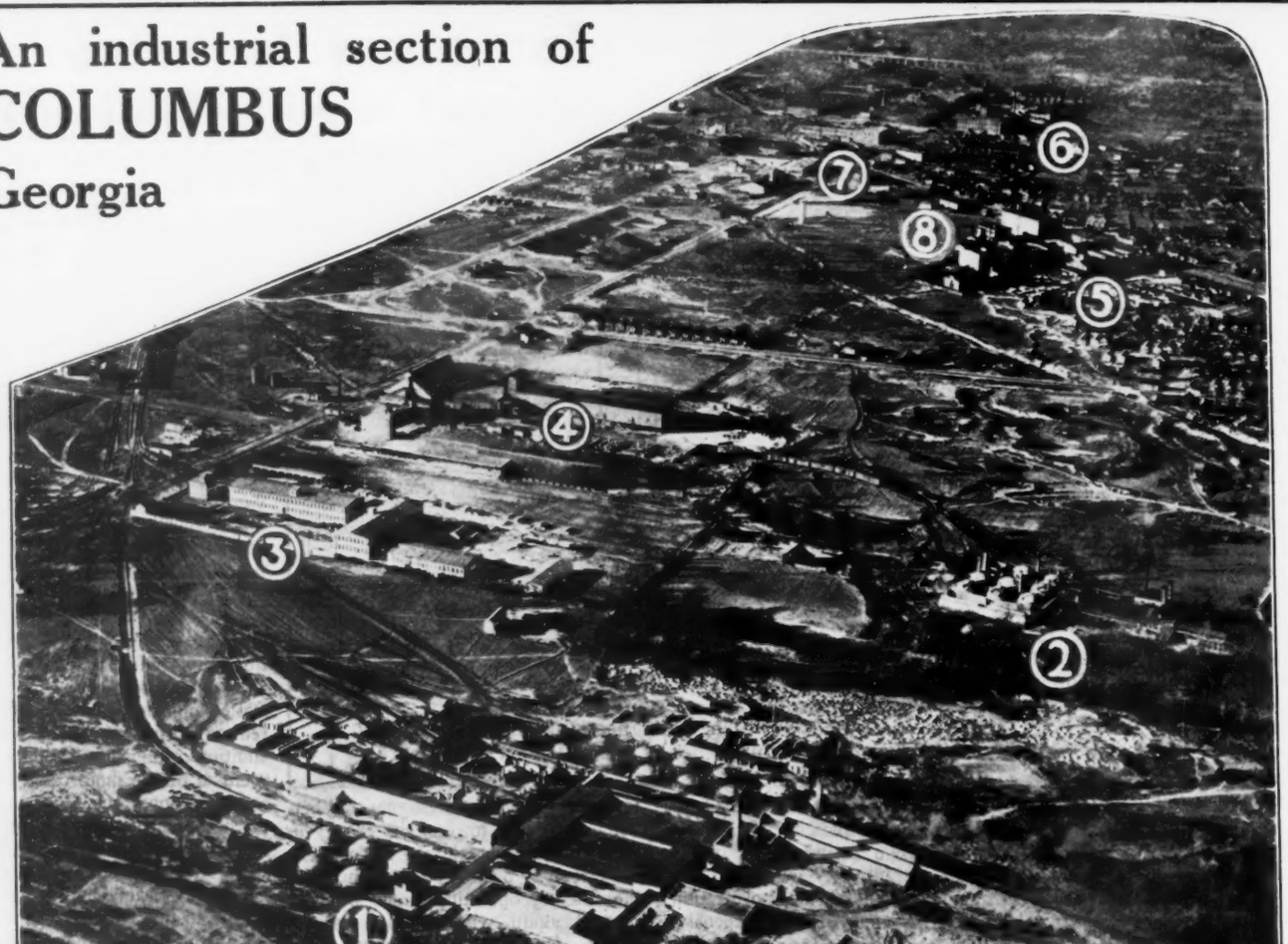
MOTOR 10 H.P. 1200 R.P.M. Belted to Elevator Counter.

TEST DATA

MOTOR & COUNTERSHAFT _ 2.35 H.P.
STARTING LOAD _____ 9.40 "
AVERAGE OPERATION ___ 6.70 "
LOAD CARRIED DURING TEST WAS 600 POUNDS.

Above is presented the eleventh installment of a series of power data sheets which have been appearing regularly in Power and Engineering issues of TEXTILE WORLD.

An industrial section of COLUMBUS Georgia



Key to this picture

1. Columbus Brick & Tile Co.
2. Berry Brick Co.
3. Centennial Cotton Gin Co.
4. International Agricultural Corp.
5. Lummus Cotton Gin Co.
6. Bradley Manufacturing Co.
7. Chero-Cola Co.
8. Pekor Iron Works.

There are Over One Hundred Manufacturing Plants in Columbus

We supply power to *all but two* of them

——and these are PARTLY operated by power from our lines. We supply 100 per cent of the cotton mills within reach of our transmission lines. Columbus probably is the most completely electrified industrial city of the entire South. Only exceptional power service could give us this prestige. Let us tell you more about our power service to manufacturers and the opportunities for industry at Columbus, Georgia.

COLUMBUS ELECTRIC & POWER CO. COLUMBUS GEORGIA

Columbus Electric & Power Co.

Columbus, Georgia

West Point—LaGrange—Newnan—Hogansville

Executive Management STONE & WEBSTER, Inc.

the retention of the shipper handles and their arrangement to operate the motor switch. New frames built for individual drive might be equipped with a number of push button stations per frame, to serve the same purpose.

There are few variable speed machines in a yarn or print cloth mill, consequently variable speed control devices are seldom necessary. The slashers might be considered as the only such machine, and their number is usually so small that any ordinary gain through better speed control could hardly be able to displace one machine and its operative.

Finishing plants are, however, full of such machines, and the possibilities of adjustable speed control are manifold. Printing machines, dryers, tenters, singers, and calenders, are a few of the machines in this class.

Progress in adjustable speed control, particularly of direct current motors, has been very rapid. The convenience of having the motor and switches out of the way and the push button station at the operator's finger tips, will be found very real in practice. The possible increased production and reduced cloth spoilage should make a handsome return on the necessary investment.

Water Supply for Textile Mills

General Survey of Methods Employed to Purify Water for Boiler Feeding and Process Work—Impurities Commonly Found—Removal by Means of Filters, Settling Tanks, Heat, Lime, Soda, Combined Lime and Soda, and Zeolite—Boiler Compounds—Water Softening Apparatus

By Charles L. Hubbard

ANYONE connected with the textile industry realizes the importance of an abundant supply of pure water both for boiler feeding and process work. It is proposed in the present article to consider, in a non-technical way, the impurities most likely to be found in water from different sources, their effect on boiler plates and in process work, and the means most commonly employed for their removal. No attempt will be made to go into the chemistry of the matter, except in the simplest way where it is necessary to show why different methods of treatment or purification are best under certain conditions.

Before taking any steps in this direction, a careful analysis of the water should be made by a competent chemist, so that all efforts may be directed along effective lines. The great variety of impurities found in water from different sources and the variation in amount of harmful substances make it impossible to apply any general remedy, and each plant must be treated as a special problem.

Common Impurities

The impurities most commonly found may be classed under three general heads according to their action, as follows: (1) Those causing the formation of scale, or producing "hardness," such as the carbonates and sulphates of lime and magnesia. (2) Those having a corrosive action, as sulphuric and carbonic acids, chloride of lime and magnesia, and sulphate of iron. (3) Alkaline impurities, including the carbonates, sulphates and chlorides of soda and potash. In addition to the above are various substances held in suspension, such as organic matter, mud, oil, etc.

Various Sources

The impurities found in water vary to some extent with the source from which it is taken, and samples from the same stream will often change from season to season, and sometimes from day to day. In wet seasons, and just after rains, the water is likely to be purer, owing to greater dilution, unless the rainfall has been sufficient to wash in leaves, mud, etc. Swiftly running streams are more likely to contain vegetable and animal matter, which tends to develop free oxygen and thus produce a corrosive action on the boiler plates and tubes.

In mountain streams the water is usually pure, and only requires filtering to make it suitable for use. In reservoirs the composition is likely to be more uniform because these supplies are usually fed by several streams, and furthermore, there is an opportunity for suspended matter to settle. Water from deep wells, and that taken from streams during dry weather, are most likely to contain the various scale-forming salts, such as lime and magnesia, because they have leached through the soil and have taken up a maximum amount of mineral matter. Condensation from exhaust heating systems and surface condensers may be made practically pure by a thorough removal of the oil, both before and after condensation.

Salts of Lime and Magnesia

Carbonate of lime is commonly found in the form of limestone, marble, or chalk. It is soluble in water containing carbonic acid gas, and is more soluble in cold than in hot water. When the water is heated to 212 deg. and this gas is driven off, practically all of the lime will be precipitated in the form of a soft mud, and the clear water may be drawn off. If heating and precipitation are allowed to take place in a boiler, the precipitate is likely to become mixed with the sulphate and oil, and so form a hard scale.

Sulphate of lime, commonly known as gypsum or plaster of paris, forms a hard scale which is difficult to remove, and when mixed with the carbonate or mud tends to harden it. It is soluble in cold water but becomes insoluble and is precipitated at a temperature of about 300 deg. The precipitate settles rapidly and must be blown out quickly to prevent incrustation.

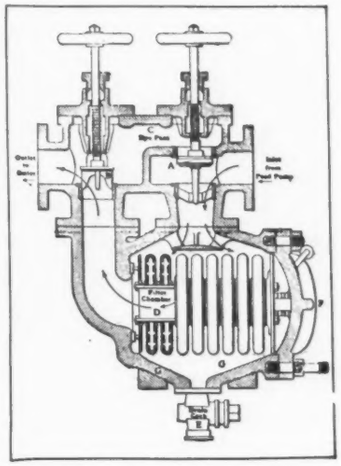


Fig. 1. Filter Which Utilizes Turkish Toweling.

Carbonate and sulphate of magnesia act much like the corresponding salts of lime, and are both precipitated by heat. All of the above substances make water hard and unsuitable for washing and scouring, where the removal of grease is the principal object sought.

Corrosive Substances

The various corrosive substances mentioned attack the metal of boilers and reduce the thickness of the plates and weaken the joints. When present in water used in dyeing and in process work connected with the manufacture of fabrics, they may cause more or less damage according to their nature and the amount present.

Carbonic acid has a decided action upon boiler plates and frequently comes from decaying organic matter found in the water. Sulphuric acid rarely occurs in natural water supplies but may be introduced by the drainage from chemical works, etc. The various chlorides usually come from the soil and cause their damage through the liberation of chlorine gas.

Water containing these substances must be treated chemically according to the ingredients found by analysis.

Alkaline Salts

The alkaline salts of soda and potash produce foaming in the boilers, especially when found in large quantities. Carbonate of soda, known as "soda ash," is one of the chemicals most frequently used for the preven-

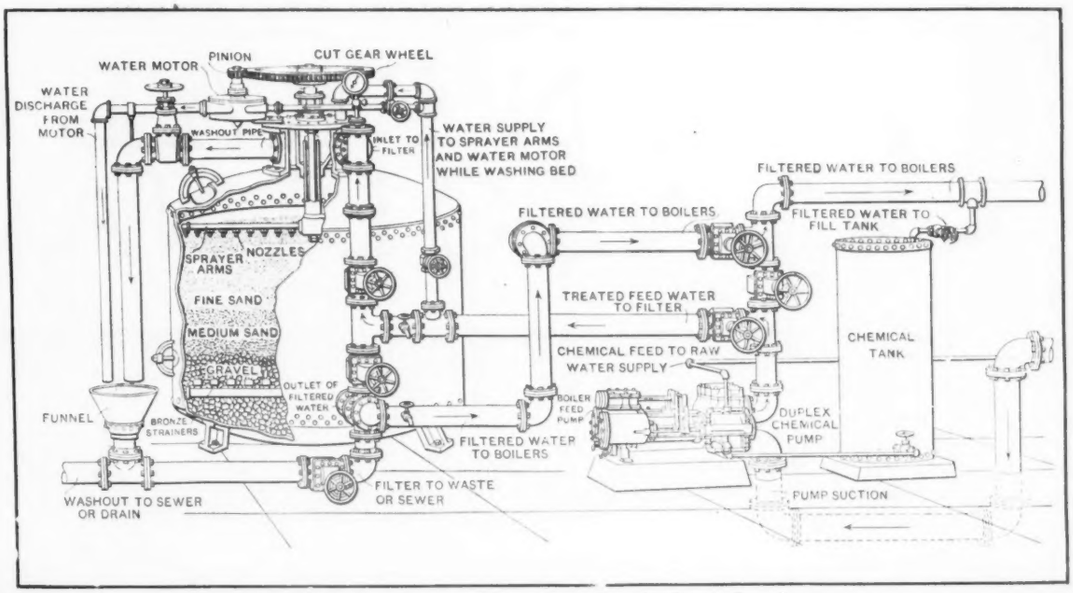
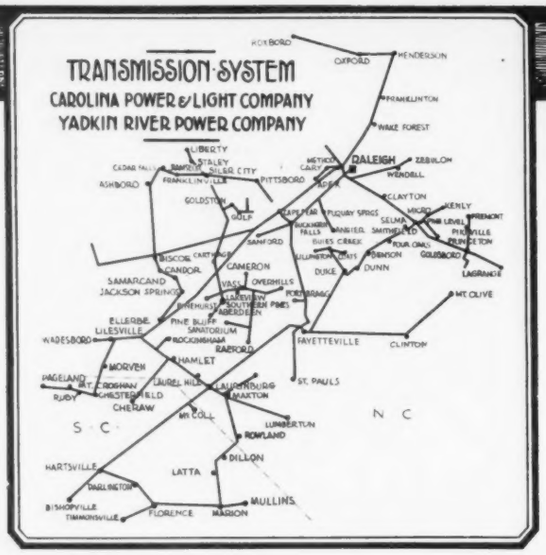


Fig. 2. A Pressure Filter Employing Sand and Gravel.



The Advantages of Super-Power Service

In selecting a site for your new mill you will naturally consider the power question. You will discover that a large power system can supply power at rates lower than the cost of service from isolated plants.

In the Central Carolinas the "Carolina and Yadkin" systems will relieve you of all worry regarding power. You can concentrate the entire effort and skill of your organization on the all-important business of manufacturing goods on a competitive quality—and—cost basis.

In this section are numerous towns and cities lying along and between the trunk lines of the Atlantic Coast Line and Seaboard Air Line Railroads which are already connected with the power lines of these systems. You will be assured a permanent and adequate supply of power at a cost regulated by state law. In addition, these towns will offer you all the necessary elements for successful manufacture—labor, climate, raw materials, etc.

We will be pleased to furnish complete information without obligating you in the least.

CAROLINA POWER & LIGHT COMPANY
YADKIN RIVER POWER COMPANY
GENERAL OFFICES: RALEIGH, NORTH CAROLINA

CENTRAL CAROLINAS

tion of scale and for softening water.

Mechanical Purification

The various methods employed for the purification of feed water may be classed as mechanical, heating, and chemical; the character of the water indicating which is called for in any given case.

Purification by mechanical means is employed only where the impurities are suspended in the water, as mud, sand, oil, vegetable matter, etc. Settling in large tanks, filtering and skimming are employed according to the nature of the impurities present and the available space for the apparatus. In the case of shallow running streams, the water is apt to contain clay, sand, and other sediment which will readily settle if allowed to remain quiet for a sufficient length of time. Two tanks, at least, are required for this purpose, so that while the water is being drawn from one, the other remains undisturbed. The space occupied by the tanks and the time required often prohibit the use of this simple method, and filtering must be resorted to.

Filters

Filters are usually composed of crushed quartz, coke, excelsior, burlap or other porous material which will pack closely and present a rough surface to which particles of solid material will readily adhere. A form of filter employing Turkish toweling as the filtering medium is shown in section in Fig. 1. The area for the passage of water is increased to 200 to 1,000 times that of the connecting pipe, thus reducing the velocity of flow through the cloth in like proportion. As the impurities collect on the outside of the filter, the resistance to the flow of water increases and is indicated by pressure gauges connecting with each side.

When the pressure difference reaches 2 or 3 lbs., the filter is cleaned by reversing the flow of water through it by means of a pair of valves at the top.

A pressure filter employing sand and gravel and provided with a tank pump for the introduction of chemicals is shown in Fig. 2. In this device the filter bed is cleansed by the action of a series of revolving sprayer arms, each carrying a number of nozzles through which the water is forced under high pressure. The impurities are carried with the water through the washout pipe at the top of the sewer, as indicated.

In order to purify the condensate from heating systems and surface condensers so that it may be returned to the boilers or used for other purposes, it is necessary to first pass the exhaust steam through an oil separator, and then usually, as a further precaution, to pass the condensate through settling tanks, or to filter through coke or some other substance. Sometimes a combination of both methods may be used to advantage. A simple arrangement of this kind is shown in Fig. 3, in which "A" is the inlet, "B" the receiving compartment, above "C" the coke filter, "D" the compartment containing filtered water, and "E" the outlet.

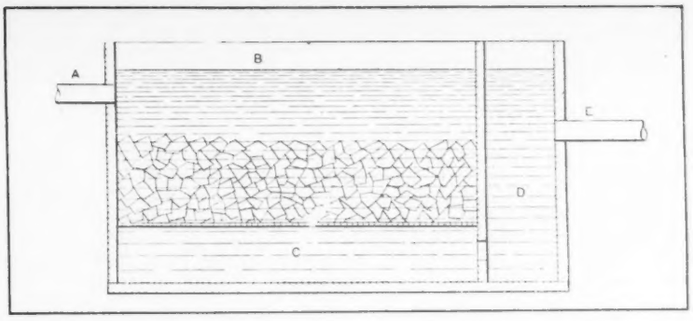


Fig. 3. Combination of Settling Tank and Coke Filter.

Purification by Heat

The method of purification by heat is employed when the water contains the carbonates of lime and magnesia in combination with carbonic acid (called bicarbonates), and also when the sulphates of these salts are present. While precipitation may take place when the water is heated in the boiler, and the sludge thus formed be blown off from time to time, it is much better to carry on this process in a special chamber and discharge the purified water to the boiler.

This is done in the case of the carbonates, which are precipitated at 212 deg. in the ordinary type of open feed-water heater, which is operated under atmospheric pressure. The impurities collect in trays or shallow pans, which are easily removed for cleaning, while the water passes through a coke filter for further purification before being returned to the boiler.

When the sulphates are to be removed also, a higher temperature of 300 deg. or more is required, which corresponds to a steam pressure of at least 50 lbs., and special closed heaters or purifiers similar in construction to the open heater, so far as the trays are concerned, must be employed.

Heating the water affects only the particular impurities mentioned in this connection, and cannot be used for general purification.

Chemical Means

The processes employing chemical means are for the elimination of the carbonates, sulphates, nitrates and chlorides of lime and magnesia, and also, in special cases, where the water contains acids, etc. Water is chemically treated for the salts of lime and magnesia by four methods, known as the lime process, the soda process, the combined lime and soda process, and the zeolite process.

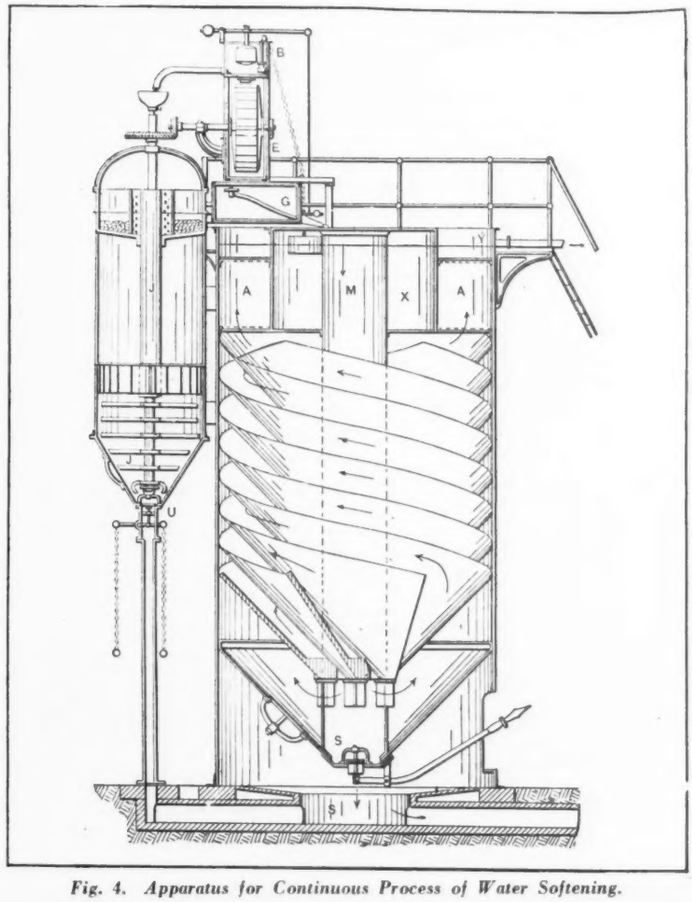


Fig. 4. Apparatus for Continuous Process of Water Softening.

Lime Process

This is used for the precipitation of the carbonates of lime and magnesia, and depends upon the removal of carbonic acid. Quick lime dissolved in water forms hydrate of lime, commonly called "limewater," a solution having a great affinity for carbonic acid. When limewater is added to feed water containing the bicarbonates of lime and magnesia in solution, the carbonic acid leaves the bicarbonate and unites with the limewater, thus changing the soluble bicarbonate into an insoluble carbonate, which is precipitated and removed. In using this method, care must be taken to add exactly the amount of limewater to take up the carbonic acid in the bicarbonate to form carbonate. Caustic soda has the same effect as limewater but is more expensive to use.

Soda Process

The soda process is used for the removal of the sulphates, and the chemical usually employed is "soda ash" or carbonate of soda. When this is added to water containing sulphate of lime, the resulting chemical action is the formation of carbonate of lime, which is precipitated, and sulphate of soda, which is soluble at all temperatures. The reaction takes place slowly unless the water is heated, which sometimes leads to the use of caustic soda. Caustic soda produces satisfactory results without heating, but is more expensive. Whenever soda ash or caustic soda are employed, the water becomes strongly alkaline by the accumulation of soda and must be blown out frequently to prevent foaming.

Lime and Soda Process

The combined lime and soda process is used when there is an excess of carbonic acid present after the precipitation of the sulphate of lime by the soda, and also when both the carbonates and sulphates of lime and magnesia are found in the same water.

Zeolite Process

This is promoted under various trade names, and makes use of a sodium silicate compound. When water containing lime or magnesia is passed through a bed of this material, the soda contained in the zeolite goes into solution while the lime or magnesia is retained by it. After this exchange has taken place to the limit, a solution of salt is passed through the zeolite and a reverse process takes place in which the soda is reabsorbed, thus restoring the zeolite to its original state, while the lime and magnesia are taken up by the solution and discharged to the sewer.

Boiler Compounds

These are sold under various trade names and comprise different substances which are introduced into the boiler in the feed water. While many of these are effective when used under the right conditions, they should not be employed as a "cure-all." Compounds of this kind should have the

backing of reliable and well-known concerns, and should only be used for conditions to which they are adapted, as shown by chemical analysis.

Water-Softening Plants

A water-softening plant includes the necessary equipment for automatically removing the impurities from the water before it is used, and may be employed in connection with both boiler feeding and process work. Water softening is carried on under different conditions known as the cold and hot processes, the former being again divided into the continuous and intermittent methods, which differ only in the way of handling the water and chemicals.

The cold process is generally used where there is no convenient means at hand for heating the water, and where large quantities are to be treated. The chemicals most frequently employed are the lime and soda solutions already described. These are added to the water automatically in the right proportions as determined by chemical analysis. The precipitates thus formed are allowed to settle in large tanks, or are removed by filtration, depending upon the form of apparatus employed. In the hot process, soda ash is used the same as in the cold process, but the carbonates are precipitated by heating the water by means of exhaust steam.

A typical apparatus for the continuous process is shown in Fig. 4. The water to be treated enters the small tank "B" at the top, from which a small portion flows into the lime tank "J" at the left, and the remainder into the large decanting tank or separator. The lime solution is fed continuously into the central portion of the latter, together with any other necessary chemicals, and first passes downward, and then upward spirally between the settling plates, as indicated by the arrows. The sediment falls to the bottom of the tank from which it is blown off, while the water passes upward through the filter "A" and is drawn from the top as indicated at the right.

An equipment for the intermittent process is illustrated by Fig. 5, and consists of two settling tanks with a treating house between them, of such height that the water can flow from the proportioning machine into either tank. The chemical solution is prepared on the lower floor, then pumped to the upper machine where it is mixed with the raw water and discharged into whichever tank is being filled. The water is then allowed to stand until reaction and precipitation take place, after which it is drawn off for use.

The two equipments shown are for the cold process. The hot process is practically the same in principle, except for the temperature of the water, which is commonly raised by exhaust steam in an open feed-water heater which forms part of the outfit. As the chemical reactions take place more rapidly at higher temperatures, the apparatus may be considerably smaller, and the hot process is therefore more frequently employed in mill work where exhaust steam is available and space limited.

Effectiveness of Light Paint

Production Increased by Reflection from White, Yellow and Orange Paint on Walls, Fixtures and Machinery

*By Edward M. Coffin**

THE textile industry above all others has tried and proved the value of certain white enamel paints for interior painting, so that their use in the industry is very general. The chief reasons for their use are the high light-reflecting value and the permanence of their whiteness. The industry, having adopted this paint method, proves itself interested in the subject of saving all possible light in the plant.

If white paint is good for the walls, ceilings and posts, it is equally good for electric conduit, panel boxes, piping, shaft hangers and all permanent building fixtures, including sprinkler piping. The color scheme adopted by many mills for the identification of various pipe services can be modified so that only the fittings are painted the characteristic color. Thus, the most important reason for white paint is consistently followed and the paint job simplified, particularly as application by the air brush is now so generally practiced.

Just as white is good for overhead work, a light color for dadoes should be adopted. A dust or coffee cream color will not show dirt quickly and has double the light reflecting value of the dark green or gray paint now so commonly used.

All the above comments, while valuable in the modern mill with adequate window areas, are especially important in mills of the older type.

Painting Machinery

Of much more importance in the paint scheme than room dadoes and only slightly less important than the walls, is the painting of the machinery—again with special emphasis when the mill is an old one depending on small window areas for daylight. When the windows are small, the direction of the light rays is very much in a horizontal direction. These light rays find machinery everywhere in the way with dark green, red and black paint that absorbs 80% to 90% and more of their light value.

Instead of accepting this heavy light loss as inevitable, it is possible to reduce it greatly by using a light-colored paint. Experience in machine shops and elsewhere has been surprisingly good. The food industry is generally supplied with white enameled machinery. Rubber mills find it valuable, and I believe a light paint can be used very successfully by the textile machinery makers. The bright color paint reflects light to dark corners and is diffused through the machinery, so that inspection, adjustments and repairs are greatly facilitated.

Worth a Trial

The mill manager usually assents to these points, but fears it will increase his maintenance costs unduly. I feel sure that in view of the experience in other places such fears are like most other fears—they have a very unsubstantial foundation. Orange and gray paint have been used for years in some mills under what appear to be very adverse conditions, and the mill management is entirely satisfied with the results. In view of the experience of others, I claim it is at least worth a fair trial. It will be appreciated, of course, that there are certain places on machines that should be painted to contrast with the yarn or thread being made so that defects or breakdowns can be quickly detected. Such locations should have special treatment.

Now, as to the best color to use. Gray is apt to be one's first thought, but it is found that most grays are much too dark and the lighter shades soil rather quickly. Apple green is better, but a yellow or orange seems the best, for it will not show the dirt quickly and its reflecting value is high.

Needless to say, care should be taken to see that the surface is clean and dry before painting and that the paint used is suitable for the purpose. A machinery paint with varnish content or an enamel gives best results. Such a paint repels oil and cutting compounds and is more easily wiped or washed.

Black machinery has been with us so long, it has become a habit. Its advantages have been overemphasized and its bad points overlooked. In this period of critical study of method and routine, these details of the paint problem merit attention. Machinery manufacturers will quickly fall in line when the buyer makes known his wants.

* Staff Engineer, Associated Industries of Massachusetts.

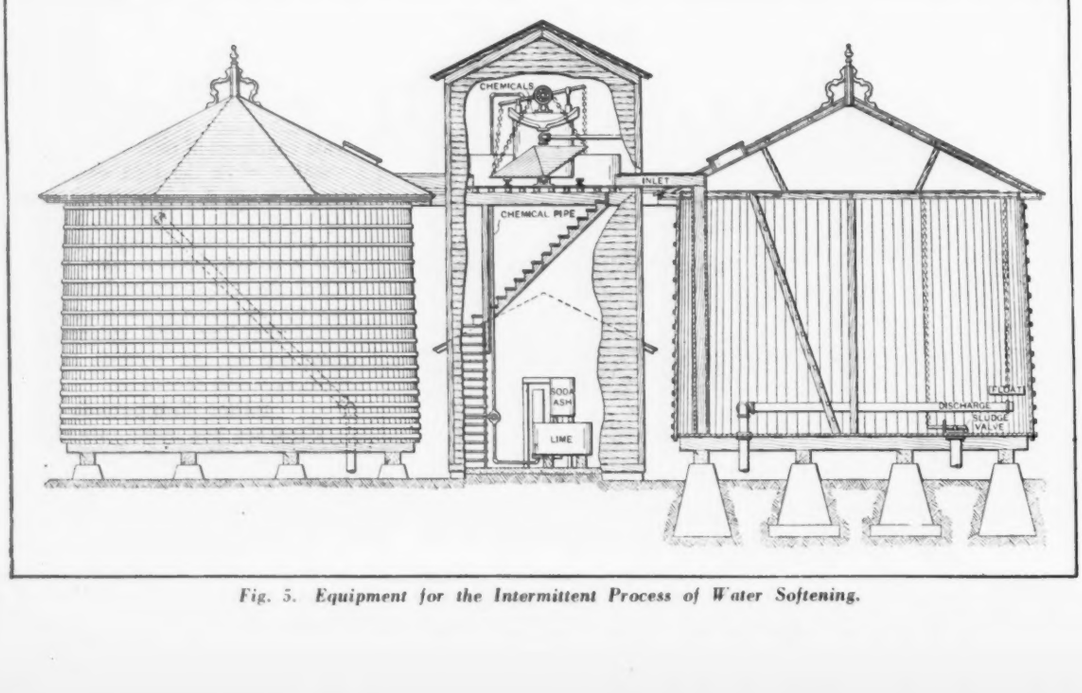


Fig. 5. Equipment for the Intermittent Process of Water Softening.

Soot Cleaner Costs

Report Shows Large Savings in Fuel and Labor

By W. F. Schaphorst

An official report has been presented to me which shows that a net annual saving of $2,385.20 resulted from the installation of soot cleaners on eight 500 H. P. vertical water tube boilers. The report shows that soot cleaners reduce the fuel consumption 6%, that they reduce the cost of labor, and that they pay for themselves every nine months. In other words, they pay 133% interest. The boilers are cleaned three times every day. By so doing, the fuel gas temperature is reduced as much as 120 deg. to 160 deg. F.

The fuel saving amounts to $2,520

per year and the saving in labor $495. Subtracting the first cost of the soot cleaner, the net annual saving amounts to $2,385.20. The boilers are cleaned three times daily at 9 a. m., 2 p. m., and 11 p. m. The first cost of the cleaners was $1,800, completely installed, and it is estimated that they will last at least five years. Mechanical soot cleaners are vastly superior to the old hand lance method of cleaning; although, to be sure, the hand lance method is much better than no method at all.

Applications of Leather Belting

Effect of High Speed on the Capacity of Leather Belts—New Rating Curves

*By R. F. Jones**

(Concluded from Oct. 3 issue)

THE effect of high speed, with the resulting centrifugal force, has long been a source of speculation among belting men. As far as I know, there is very little experimental data available on this subject, a good deal of the accepted data being of the computed variety. For this reason there has been more or less doubt as to the accuracy of the assumptions regarding the high speed operation of belts.

Our experiments were made at belt speeds ranging from 2000 F.P.M. to 8000 F.P.M., on several belts, some with high capacity and others with low capacity surfaces. Certain tests were made comparing single, double, and triple thickness, throughout the above speed range, and in these cases the comparative tests were all made on the same belt surface. In order to do this the belt was made up first as a three ply and tested. Then the outside ply was stripped off leaving a double with the same transmitting surface. When the two ply was tested the operation was repeated, ending with a single belt. In this way all comparative tests of single, double, and triple thicknesses were much less subject to our greatest error, namely, variations in belt surface.

The two charts, Figs 9 and 10, chosen from many, give representative results from two different belts, the first being charted from tests on a 4-in. single leather belt whose surface had been buffed to produce a low capacity. The second shows a series of tests comparing a 2-in. single and a 2-in. three ply belt using the same high capacity surface. Horsepower is plotted on the vertical axis against belt speed on the horizontal axis, at a slip of 1½%. Several initial tensions or slow running tensions (S.R.T.) are used, and each curve is so marked.

Note that the curves for the low capacity belt, J-28, on Fig. 9, go up to a peak at approximately 6500 F.P.M., and are coming down again at 8000 F.P.M., while on Fig. 10 the high capacity belt curves have barely reached their peak or maximum power at 8000 F.P.M. This is the difference in behavior between low and high capacity belts. In addition to transmitting more power per inch of width, a high capacity belt has its greatest power at a higher speed. A high power peak is naturally very important in the operation of high speed belts, because such a belt has more capacity at any speed, and a great deal more at high speeds. The curves on chart Fig. 10 furnish a good comparison of the relative capacities of single and triple belts. Recommendations as to the capacity relation between singles, doubles, and triples are given later in the report.

The following conclusions were drawn from the experiment:

1. The speed at which the maximum power, or power peak, of a leather belt occurs, depends upon the frictional condition of the leather. A belt with a poor surface shows a peak at about 5000 F.P.M. while a good belt might go to a maximum of 8000 F.P.M.

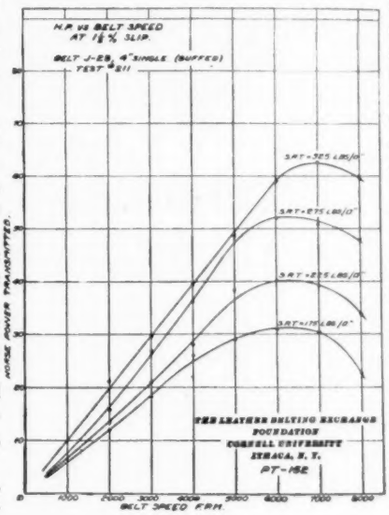


Fig. 9.

2. Belt speed seems to have about the same effect on singles, doubles and triples, so a constant relation between their capacities can be established for all speeds.

3. It is possible to transmit power at speeds well beyond the speed where the computed centrifugal force equals the initial tension. (This value has usually been considered the absolute limit of transmission for all belts, the idea being that the belt would be forced away from the pulley by centrifugal force at this speed, so no power could be transmitted.)

New Rating Curves

In the above paragraphs I have given a brief resume of the research work necessary to secure enough information to allow properly for the effect of the various conditions of pulley size, center distance, and belt speed, studied. The purpose of the following paragraphs is to put that information in such form that it can be readily applied by the average person to practical belt problems.

The method used in doing this necessitates the use of two curve sheets. First, Fig. 11 which can be considered as a series of master curves from which the horse power per inch of width is readily obtained for any belt speed up to 8000 F.P.M. in all weights of belt up to three ply, a separate curve being used for each weight of belt.

These curves are intended to apply to ideal conditions only, and consequently the horse power obtained from them should be corrected for the effect of center distance and pulley size. A second chart Fig. 12 contains three correction curves, for modification of the ideal ratings of Fig. 11, two of them being for center distance with the tight side of the belt above and below, and the other for pulley size. The vertical axis of the chart gives the correction factors, for center distances between 4 and 25 ft., and for small pulley diameters between 4 and 36 in. The correction factors are multiplied together and the result multiplied by the H.P. obtained from Fig. 11 to give the corrected H.P. per in. of width.

To use these curves proceed as follows:

1. Pick the correction for center distance from one of the two center distance curves depending on whether the tight side is above or below. If the center distance is greater than 25 ft. use the correction given for 25 ft.

2. Pick the correction for pulley size from the pulley size curve of Fig. 12, using the diameter of the smaller of the two pulleys. If both pulleys are larger than 36-in. no correction is necessary.

3. Choose the curve on Fig. 11 corresponding to the desired weight of belt, and pick from it the H.P. per inch of width according to the belt speed used.

4. Multiply the result of 1, 2, and 3 together to get the corrected H.P. per inch of width.

5. Divide No. 4 into the total H.P. to be transmitted to get the correct width of the belt.

Precautions

1. Use the above charts only on horizontal or approximately horizontal drives.

2. Do not use chart Fig. 11 without the corrections on Fig. 12.

3. The diameter of the larger pulley should not be more than six times the diameter of the smaller one.

Perhaps an example will make the use of these charts clearer. Suppose a 10-in. pulley running at 1000 R.P.M. giving a belt speed of 2600 R.P.M., is to transmit 15 H.P. to a 36-in. pulley at a center distance of 8 ft. Assuming the tight side is below, what size of heavy single belt is required?

1. Correction factor for 8 ft. center distance T1—below from Fig. 12=.87.

2. Correction factor for 10-in. pulley size from Fig. 12=.853.

3. H.P. per inch from Fig. 11 at belt speed of 2600 F.P.M. for heavy single belt=5.25.

4. Multiply .87 times .835 times 5.25=3.9 H.P.

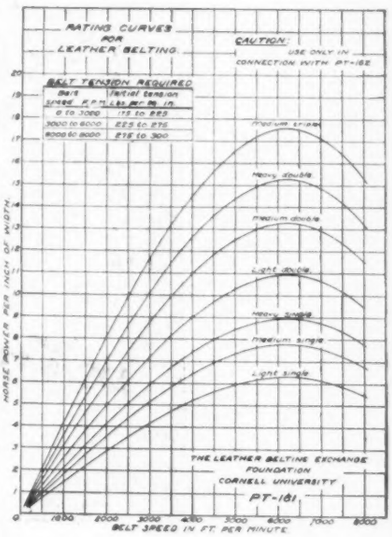


Fig. 11.

5. Divide 15 by 3.9=3.85-in. wide. Use 4-in. heavy single belt.

When the width of belt comes out an uneven size such as 3.85-in. the next larger size should always be chosen. A table of the initial tensions required for different speeds is given on Fig. 11. The tensions are given in lbs. per sq. in. of cross-sectional area per strand of belt. The cross-sectional area is obtained by multiplying

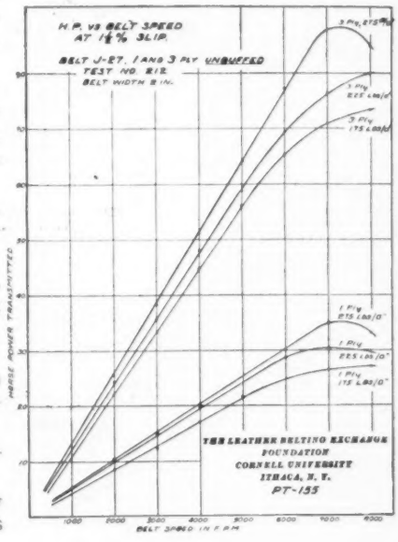
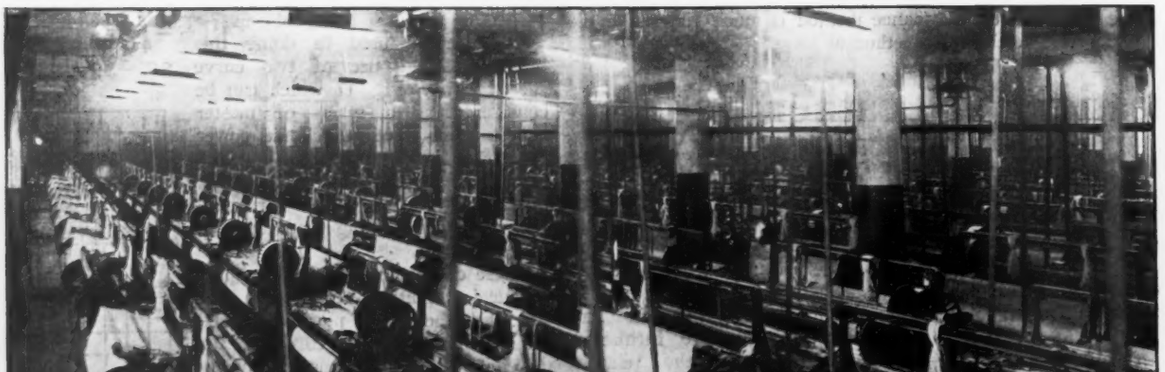


Fig. 10.

the width times the thickness, so a belt 4 in. wide and .2 in. thick would have a cross-sectional area of 4 times .2=.8 sq. in. If the recommended tension is 175 lbs. per sq. in., the tension per strand on this belt would be .8 times 175=140 lbs.

The use of the two charts, Figs.

* Research Engineer, The Leather Belting Exchange, Philadelphia, Pa.



Home Cotton Mills
St. Louis, Mo.

This user "believes Work-Light best obtainable for this sort of work." Photo shows Work-Light at night in the weave room.

Why is this different light used in so many leading mills?

LIGHT that is yellow-green and cool, diffused from a tube instead of a bulb! Used by Crompton, Stehli, Masland Carpet, R. & H. Simon, Home Cotton, Cross Cotton, Post & Sheldon, and other famous mills

In the knitting industry used by Real Silk, Hole-proof, Allen A., Wayne, Chipman, Davenport, Apex. In the automobile field—Packard, Chrysler, Ford, General Motors, Studebaker, and nearly all the others.

Why is it that so many leading plants agree in choosing Work-Light? Is it cheaper to buy? No. Is it more ornamental? No. Does it consume less current? Not always.

The answer is that Work-Light provides operating advantages that cannot be expected from ordinary light. Rich in the yellow-green rays that do most to help men see, it increases production, cuts costs, and prevents eye-strain and headache. Workmen finish the day with their eyesight almost as fresh as it started. Night shift equals day shift in quantity and quality alike.

And there is no experiment about it. Work-Light has a record of performance, day by day and night by night, in all sorts of plants, covering more than 22 years.

See Work-Light in your own mill before you make any lighting investment. We will furnish, without obligation on your part, enough Work-Light lamps for a trial in any department you select. Write or wire Cooper Hewitt Electric Co., 85 River Street, Hoboken, N. J.

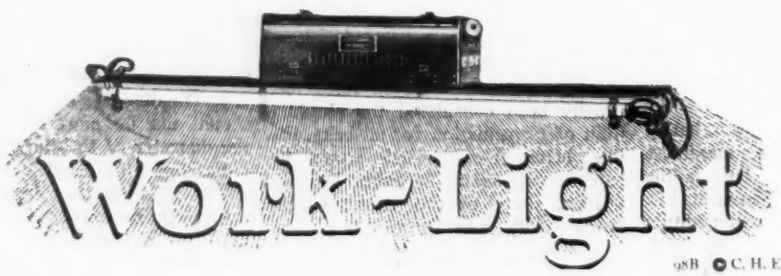
COOPER HEWITT WORK-LIGHT

Comparisons like these tell the Work-Light story

One textile plant found that, under Work-Light, its workmen could count threads hung 20 feet away. Under ordinary illumination, the same men had to move 10 feet closer to the threads in order to see clearly enough to count. This plant is now a Work-Light user.

Holeproof Hosiery Company found that, with Work-Light, the percentage of hosiery that required re-boarding was cut in half. Reporting on their investigations in the knitting departments, Holeproof engineers credited Work-Light with having effected a definite production increase of 4.2 per cent.

A manufacturer of locomotive stokers installed Work-Light in a basement department and found that for the first time workers in that part of the plant were able to earn a bonus. Naturally, the difficulty previously experienced in inducing men to work there quickly disappeared.



98B © C. H. E. Co. 1925

11 and 12, takes care of the effect of the arc of contact, pulley size, pulley ratio, center distance with the tight side above and below, and belt speed. They are not intended to allow for vertical or quarter turn drives, as no investigations have been made on them. However if we do later study these other types of drives, corrections can be made for them in somewhat the same manner.

Methods and Reasoning

I shall include a few words on the methods and reasoning used in originating the curves on Figs. 11 and 12. The set of curves on Fig. 11 are based on two principles, one being that the rate of slip in ft. per minute should increase with the belt speed, but that the percentage of slip should decrease. Therefore a belt performing in accordance with this assumption should slip about 1.5% up to 2000 F.P.M., 1.25% at 3000 F.P.M., 1% at 4000 F.P.M., .9% at 5000 F.P.M., .8% at 6000 F.P.M. and .75% at 7000 to 8000 F.P.M.

The second principle is that speed affects the various thicknesses of leather belting in the same way, so that definite ratios between the capacity of the different thicknesses can be established which will hold true for all speeds. In terms of the medium single the following ratios were used, light single .81, medium single 1.00, heavy single 1.15, light double 1.40, medium double 1.70, heavy double 1.95, medium triple 2.25. It is assumed that the initial tension should be applied in proportion to the belt thickness, as given in the government specifications for all weights of belts.

The center distance curves of Fig 12 which are based on our experiments are constructed so as to give proper center distance allowance for a belt of average capacity. We did not get as much variation as this on a low capacity belt, but got a great deal more on a high capacity belt, so the curves are a compromise between the two. The effect of center distance with the tight side on top is less than with the tight side below because the sag of the loose side tends to become greater as the center distance is increased, thus reducing the arc of contact when the loose side is below, and partly canceling the effect of the increased weight of belt between the pulleys.

Therefore the greatest difference in transmission capacity between operating the tight side above and operating it below occurs at the longest centers, and gradually becomes less with short centers, until at 4 ft. there is practically no difference in the power transmitted.

Careful examination of the data taken on pulleys of different diameters, revealed that the arc of contact does not seem to have as much effect on transmission capacity as the pulley diameter, and that the effect of reducing the size of one pulley is about the same as though both were reduced. Thus a 12-in. pulley driving a 36-in. pulley will give about the same capacity as though it were driving another 12-in. pulley.

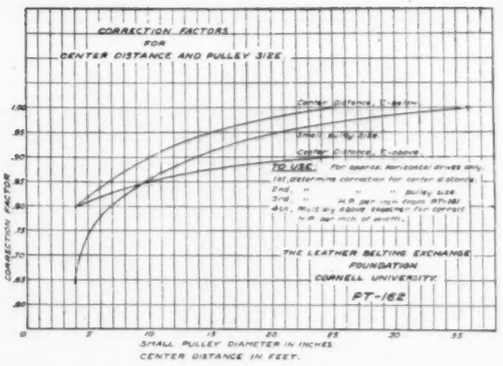


Fig. 12.

It is likely that when one pulley is smaller than the other most of the slip takes place on this pulley instead of being divided between the two, thus increasing the co-efficient of friction between the belt and the small pulley, which tends to compensate for the loss in the arc of contact on this pulley. The diameter of the small pulley, or their common diameter if they are the same size, seems to be the determining factor in the power transmitted by the belt.

With this principle in mind, the curve on Fig. 12 marked "small pulley size" was drawn. It takes care of the three factors, arc of contact, pulley diameter and pulley ratio, and tremendously simplifies the computations, as compared with previously used methods of allowing for these factors.

In addition, if the diameter of the smaller pulley is the determining factor, then for big drives the same thing should hold true. Thus a 3-ft. pulley driving an 18-ft. pulley, should transmit the same power as though it were driving another 3-ft. pulley, or any size between 3 and 18 feet, at the same center distance.

Our data indicates that increasing the pulley diameters beyond 36 in. does not give much increase in capacity, so if both pulleys are larger than this the correction factor would be 1.00, leaving only center distance to be allowed for. The correction also becomes 1.00 for center distances over 25 ft., when the tight side is below, although there is probably some increase in capacity for greater center distances.

Road Transport in England

Costs of the Bradford Dyers' Association for Operating Fleet of Over One Hundred Motor Trucks

By J. A. Hunter

LONG hauls of raw materials, as from port to mill, are made by rail in England and use is sometimes made of coasting steamers to shorten and cheapen the rail journey. The railroad is used extensively for the shipment of finished goods over long distances, but materials in process are moved almost entirely by road transport. The subdivision of the industries into processes carried on in mills or works situated some distance apart leads to a large amount of road traffic and in its progress from fibre to fabric almost any one lot of material covers many miles.

The expense of continually shifting blocks of goods from mill to mill is a subtraction from the economies arising from subdivision, and in an ordinary way little definite information is obtainable about this expense. The cost is not in all instances carefully kept and, where it is recorded, details are not usually available. Where the cost of transport is definitely recognized as high, the sufferer makes the best of it by setting off the gain in convenience against the admittedly high rate of ton-mileage. And to job dyers and others dependent upon prompt supplies a high charge for quick haulage may be abundantly justified by the avoidance of idle machinery.

Dyers Collect and Deliver

Job dyers customarily both collect and deliver the goods which they treat and although most of the journeys are between points not more than 10 to 15 miles apart, some are as much as 60 miles; meaning 120 miles out and home. The sight of trucks bearing the names of dyers is one of the commonest on the Lancashire and Yorkshire roads.

It is now practicable to give some insight into the economy of road transport in England as revealed by the records of the Bradford Dyers' Association, a job dyeing concern with some 30 branches situated mostly in the Bradford and Manchester areas. The Association operates a fleet of 112 mechanical vehicles and of these 10 are steam wagons of 3-ton or 5-ton capacity used for such purposes as hauling coal. Seven are passenger vehicles for officials and travelers, leaving a remainder of 95 gasoline trucks, of which all but six are of over 1-ton capacity. In the second six months of last year the total mileage for all vehicles was 592,991, or say 882 miles per vehicle per month.

Average Monthly Cost Records

	5-6 ton Saurer	4 ton Leyland (Manchester Service)	4 ton Leyland (Local Service)	2-3 ton Lancia	2-3 ton Leyland	1 ton Fiat
Miles Run	1,114	1,466	987	937	743	817
Cost Per Mile, Cents	42.4	29.40	39.40	35.60	34.10	24.4
Ton Miles	5,091	4,335	2,239	1,439	946	687
Cost Per Ton Per Mile, Cents	9.30	9.94	17.18	22.52	26.70	31.34

Mileage of Trucks

The numbers and types of vehicle together with a statement of the average monthly mileage registered for each unit is given below, and in considering the subject of mileage it has to be reflected that during the period in question the dyehouses were not on full work. They were working in general three days a week and this implies some reduction in the normal number of journeys, although probably not a strictly proportionate one. More trips would assuredly have been necessary during a 5½ or 6 day week.

Average Monthly Mileage Per Car

Gasoline Trucks		
4	5/6 ton Saurer	929
45	4 ton Leyland	1,126
3	2/3 ton Lancia	911
23	2 ton Leyland	600
14	1 ton Fiat	858
2	3/4 ton Maxwell	547
2	1/2 ton Fiat	941
2	1/2 ton Austin	772
Steam Trucks		
7	5 ton Mann	525
3	3 ton Mann	434

The figures are not given as illustrations of the capacity of the conveyances but simply as evidences of the amount of work given to them; this, of course, being affected by the proximity of the dyehouse to the mills or warehouses for which their work is done.

Monthly Costs

In arriving at the monthly costs of working, the following basis has been used:

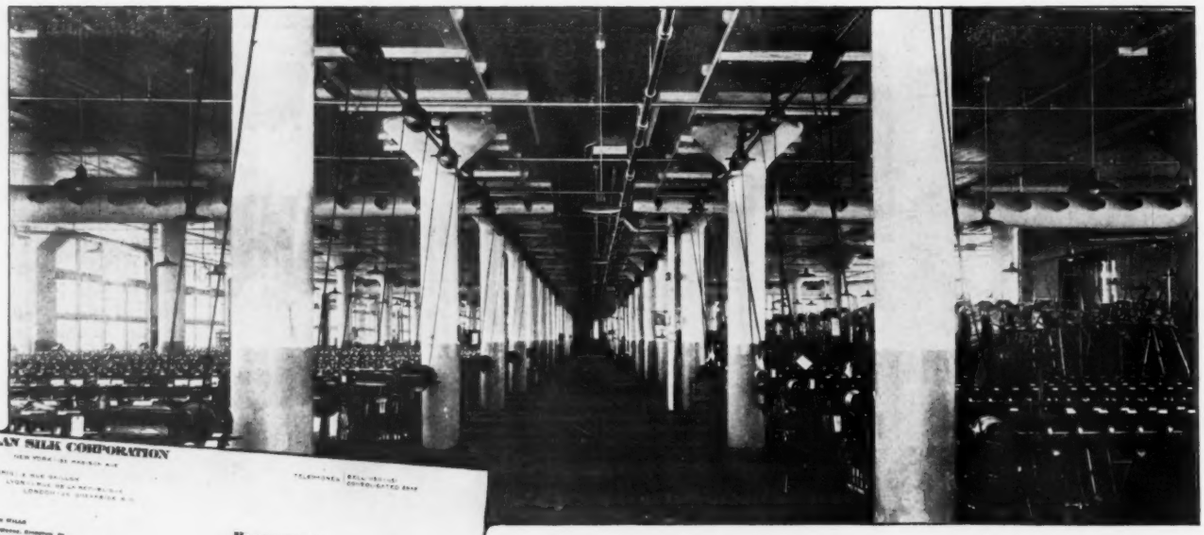
Standing charges = Interest on Capital + Vehicle Insurance + Establishment Charges + Depreciation + License Charges. (Interest at 5% per annum and depreciation at 20%.)

Running costs = Gasoline + Oil + Grease + Kerosene + Tires + Repairs + Expenses + Driver's Wages + Mate's Wages. (Expenses cover overtime payments.)

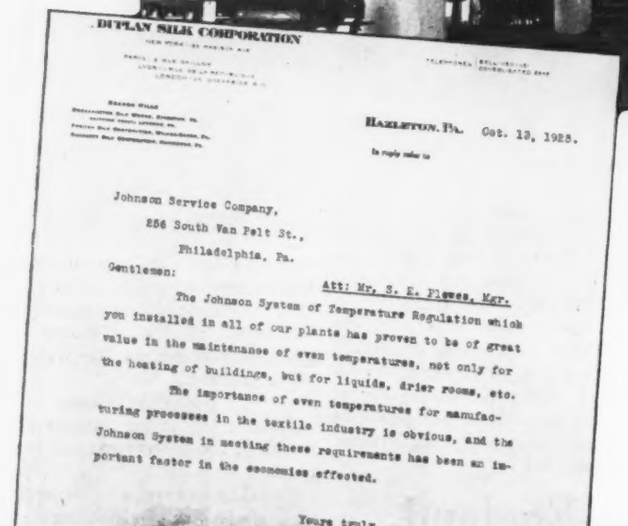
These two added together supply the total and in converting the records into United States currency the English penny has been taken in the following table at a value of 2 cents.

The short working week may probably have meant fuller loads per journey, but it appears upon this evidence that the vehicles which fetch and carry for the Bradford Dyers' Association cost a maximum of 42.4 cents per mile run, and 31.34 cents per ton mile. The vehicles in question are not all new ones and their ages are from 7 to 68 months.

Precise figures are not available to show the value of the loads but this must correspond closely with the average value of cotton and wool cloths and piece dyed silks. The Association is in the most favorable position to take advantage of economies in handling and its records are as representative as any.



A view of the Spinning Department of the Duplan Silk Mill in Hazleton, Pennsylvania.



DUPLAN SILK CORPORATION

HAZLETON, Pa. Oct. 13, 1925.

Johnson Service Company,
256 South Van Pelt St.,
Philadelphia, Pa.

Gentlemen: Att: Mr. S. E. Figues, Mgr.

The Johnson System of Temperature Regulation which you installed in all of our plants has proven to be of great value in the maintenance of even temperatures, not only for the heating of buildings, but for liquids, drier rooms, etc.

The importance of even temperatures for manufacturing processes in the textile industry is obvious, and the Johnson System in meeting these requirements has been an important factor in the economies effected.

Yours truly,
DUPLAN SILK CORPORATION
Chief Engineer

"The importance of even temperatures . . . is obvious"

Another leading textile mill pays tribute to "uniform temperature."

They're all coming to it. It's the same as humidification. You can not get the utmost out of a humidifying system unless it is *automatically regulated*.

Automatic regulation of temperature, by means of Johnson Thermostats, maintains temperature at one point—the best temperature for men, machines and processes.

In developing machines and methods to the "n'th degree" many of us have passed by this fundamental question of heat.

Johnson Thermostats are used throughout the country in thousands of plants.

A new catalog giving more information about the regulation of temperature will be sent to you on request.

The Johnson DUAL Thermostat

This new thermostat maintains one temperature during the day and a lower temperature at night. Fuel is saved and at the same time machines and processes are protected.

The change from day to night temperature is made by merely pushing one control button. Individual requirements can be maintained at uniform temperature day and night by adjusting the dials in the rooms affected.

Will you give the subject of Temperature Regulation the importance it deserves? We are prepared to offer definite suggestions without obligating you in the least.

JOHNSON SERVICE COMPANY — *Main Office and Factory:* Milwaukee, Wis.

BRANCH OFFICES

Atlanta, Georgia
Albany, New York
Boston, Massachusetts
Buffalo, New York
Chicago, Illinois
Cleveland, Ohio
Cincinnati, Ohio
Dallas, Texas
Des Moines, Iowa
Detroit, Michigan
Denver, Colorado
Greensboro, North Carolina
Indianapolis, Indiana
Kansas City, Missouri
Los Angeles, California
Minneapolis, Minnesota
New York City, N. Y.
Pittsburgh, Pennsylvania
Portland, Oregon
Philadelphia, Pennsylvania
Seattle, Washington
San Francisco, California
Salt Lake City, Utah
St. Louis, Missouri

JOHNSON TEMPERATURE REGULATING COMPANY OF CANADA, Ltd., Calgary, Alberta; Montreal, Quebec; Toronto, Ontario; Vancouver, British Columbia; Winnipeg, Manitoba

JOHNSON THERMOSTATS

NEW MACHINERY AND PROCESSES

Dual Thermostat

Controls Temperature Economically Day and Night

During the winter months an attempt is made to maintain a certain uniform temperature in the mill throughout the day, regardless of the outside temperature. At night only enough steam is required to prevent dyebaths, kettles, water pipes, etc., from chilling and freezing. Without regulation, the night temperature is usually maintained at a much higher point than is necessary. The Johnson Service Co., Milwaukee, Wis., has designed a device known as the "dual thermostat," by which the night temperature may be maintained at exactly the point that offers full protection to liquids without waste of fuel. Both high and low regulation are obtained by the same device.

All that is necessary to change the system from day to night temperature is for the superintendent or the engineer to push a button in the office. If some part of the plant is working at night, normal day-time temperature may be retained in certain departments by turning the dial in the rooms affected. It is claimed that, by means of the lower temperature, fuel is conserved and the moisture content of the stock is prevented from decreasing noticeably. (When humidifiers are not in operation, high temperatures permit rapid evaporation.)

The dual thermostat is equipped with two bi-metal thermostatic elements, one for normal or day temperatures and the other for low or economy temperatures. Either of the thermal elements function to control temperature accurately and is brought into action by the air pressure in the piping system. By the addition of a simple attachment to the standard thermostat, it is now possible by momentarily decreasing the pressure in the air piping to about 7 lbs. and restoring it to 15 lbs., to have either the normal temperature element or the low temperature element operate as preferred.

The thermostat controls accurately on either thermal element without variation in temperature noticeable to the individual. The change from normal or day to low or night temperatures is accomplished by a push button switch that controls the air pressure rise and fall in an economical manner. Only the air pressure in the main is reduced; the storage supply of air is not changed, but is closed off while the push button automatically completes the change in the day or night control of the dual thermostat.

Each dual thermostat is equipped with a concealed key dial to be used in setting the instrument to control temperatures constantly at about 70 deg., or to regulate intermittently at day or night temperatures. This dial is stamped with the words "Day" and "Dual." When the word "Day" appears before the opening in the thermostat front, it will control only at normal temperatures. When the dial has been turned to show the word "Dual" it will control temperatures at about 70 deg. for normal conditions, and 40 to 50 deg. for off periods under the action of the central push button switch. Any of the dual thermostats in a building can be set to operate either at normal temperatures or dual temperatures and can be changed from time to time by means of the concealed key adjustment. In addition to the concealed key adjustment, an exposed button switch has been arranged for the individual dual thermostat cover. This button disengages the low temperature thermal element and secures temperature regulation on the high point or day operation. The next time the dual system is operated this instrument is ready to control at either day or night conditions.

Light-Fastness Tester

New Model Designed for Small Laboratories

In response to a demand for a smaller model of the "fade-ometer" for testing the fastness to light of coloring materials, the Atlas Electric Devices Co., 360 W. Superior St., Chicago, has developed the "laboratory type L" especially for use where requirements are small. The lamp element is precisely the same as in the standard "commercial" machine, and the fading results are identical. The machine is placed on a table or bench, while access to the lamp mechanism is had through the doors at the back. The capacity is 16 specimens, all conveniently located in front at the standard distance of 10 in. from the arc. The bench space occupied is 24 in. by 28 in., with an overall height of 41 in.

The fade-ometer assists textile mills purchasing dyed yarns to check up the fastness of the yarns within 24 hours after receipt and avoid the consequences of possible error on the part of the dyer. On the other hand, the mills can safely guarantee the degree of fastness of the goods they ship. This is of immense value to the sales department, as buyers are demanding guarantees. Dyers and finishers can, by using a few ounces of a dye, determine in a few hours whether it will stand up to sunlight without running the risk of spoiling a big batch and without the long delay of a sun test. The exact rates of fading can be determined for different dyes so that different colors of yarns can be chosen to fade uniformly in the finished goods. This will sometimes permit the use of less expensive dyes. The fade-ometer will test material in the loose fibre, yarn, or fabric.

Dyestuff manufacturers can quickly test the newest colors and different methods of dyeing. Thus manufacture or shipment of unsuitable dyes can be avoided. Dyes can be graded according to fastness by a definite scale and this can be done in a short time to take advantage of seasonal demands. A customer's claims as to lack of fastness can be quickly cleared up. It gives the maker who has a well-equipped testing laboratory an immense advantage over the plant that depends on guesswork and sun tests.

The fade-ometer utilizes the violet

New Model Fade-Ometer of the Atlas Electric Devices Co.

carbon arc, which is controlled and maintained constant by automatic mechanism contained within the instrument cabinet. The arc stream plays between special electrodes and develops a spectrum containing the ultra-violet and other rays found in the spectrum of sunlight. Being of the same actinic properties as sunlight, this arc affects all colors and produces chemical reactions as in sunlight. These light characteristics, however, never vary. They are identically reproducible, hence the possibility of an absolute standard. The cabinet surrounds the arc and encloses all of the controlling mechanism. It has a series of exposure openings, equally spaced from the arc at a distance based upon a scientific calculation of relative sun and arc light values and distances. Each exposure opening receives the same volume of light per unit of area.

The samples or swatches to be tested are placed in individual holders which are positioned before the cabinet openings. The holders are arranged to cover a portion of the sample so that comparison may be made between tested and untested portions. The tested samples may then be mounted on a standard test card giving full data as to material tested, dyestuff used, length of exposure, and other useful details forming an invaluable record. The cabinet is made in two sections, the lower of which can be raised for renewing the electrodes and cleaning the globe. The cabinet and holder mounting are constructed in such manner that the temperature of the exposed surfaces of the samples is normal for testing purposes. Underneath the light is provided the humidifer which is kept filled with water. The radiant heat from the light evaporates this water and carries the vapor upward through the drum, thus maintaining the proper humidity in the region of the samples.

The fade-ometer is used wherever electric current is available, either alternating or direct. The entire structure is a self-contained unit requiring no installation except the connection of its two conductors to a source of current. It should be connected to a power circuit rather than to a lighting circuit. The voltage of power circuits is commonly 220 volts.

RECENT TEXTILE PATENTS

Cotton chopper. 1,557,102. C. J. Smith, McKinney, Tex.

Dye, Disazo. 1,557,265. R. C. Miller, Winfield, L. I. New York.

Fabric printing machine. 1,556,976. N. C. Thackeray, Pawtucket, R. I.

Knitting machine, Selective thread feeding mechanism for circular. 1,556,867. H. L. Munz, Philadelphia, Pa.

Loom. 1,557,315. C. J. Nauen, W. Somerville, Mass.

Looms, Attachment for. 1,557,002. A. J. Astle, Middletown, Conn.

Looms, Warp stop mechanism for. 1,556,807. G. W. Reid, Lawrence, and A. Durand, Methuen, Mass.

Looms, Warp stop mechanism for. 1,556,809. M. L. Stone, Lawrence, Mass.

Spinning and like machines, Builder mechanism for. 1,557,363. E. Hartley, Whitinsville, Mass.

Textile fabric and manufacturing the same. 1,557,398. C. Balay, St. Etienne, France.

Thread cutter, Shuttle feeler. 1,556,808. A. E. Rhoades, Hopedale, Mass.

Tire fabric and making the same, Cord. 1,557,329. R. B. Respress, New York, N. Y.

Yarn winding machines, Builder mechanism for. 1,556,814. H. H. Burdett, Hopedale, Mass.

Yarns, Machine for curling or decurling yarns. 1,557,182. B. D. Micklethwaite, Huddersfield, England.

Knitting machines, Web restraining attachment for. 1,555,607. H. G. G. Querns, Philadelphia, Pa.

Loom. 1,555,073. E. Perrin, Port Jervis, N. Y.

Looms, Spool chain for Axminster. 1,555,159. W. W. Robertson, Worcester, Mass.

Spindles of self-acting mules, Mounting of. 1,555,385. J. L. Rushton, Bolton, Eng.

Spinning spindle. 1,555,693. F. E. Mueller, Mt. Vernon, N. Y.

Weft carrier magazine. 1,555,173. E. J. Wentz, Danville, Va.

AMERICAN · WOOLEN · COMPANY
TRADE MARK REGISTERED U.S. PAT. OFFICE

Now—as Usual

The American Woolen Company offers to the trade and to the American public, the most extensive lines of fabrics in America.

The unending variety of weaves and patterns meets every demand for style and color variation. And every fabric, from the least expensive to the very finest quality, is offered at a price that makes each fabric unequaled for its "per dollar" value.

Demand American Woolen Company's fabrics for custom-made or ready-to-wear garments.

"Makers of correct fabrics for men's and women's wear."

American Woolen Company

Selling Agency:
American Woolen Company of New York
John W. Burrows, Pres.
225 Fourth Avenue,
New York City.

TECHNICAL SECTION

Chemistry and Physics of the Wool Fibre

Chemical Composition of the Fibre and Its Impurities—Effect of Heat and Moisture—Various Ways in Which Water Is Held by Fibre—Action of Acids, Alkalies, Oxidizing Agents, Formaldehyde, Metallic Salts and Other Chemicals—Methods of Bleaching

By Frederick Albert Hayes

This is the fifth of a series of articles on the fundamentals of wool chemistry and physics. Previous articles appeared July 4, Aug. 8, Sept. 5, and Oct. 10. The object of the author is to assist the man engaged in wool manufacturing to understand the various reactions and physical changes which occur in the processes with which he is concerned. The series makes clear many interesting facts not generally understood.

WOOL is an excellent illustration of a complex organic compound. It is thus classified for two reasons—first, because of the old theory which supposed organic compounds the result of life processes; and, second, because of the modern theory which arbitrarily classes all carbon compounds as organic. The theory of organic compounds resulting merely from the life process necessarily has been discarded, because many can be synthesized from the most prosaic and lifeless of inorganic starting points. Wool remains to be synthesized, and it is not liable to call for headline announcements in this connection for some time to come.

Textile chemistry is a relatively new profession; and, while tremendous strides have been made in classifying the whys of textile processes, much remains to be done and explained. The textile chemist is handicapped by a lack of exact knowledge as to the constitution of wool. A metallurgical chemist deals with elements of which much is known. For instance, iron and the manner in which it is affected by sulphur, phosphorous, manganese, etc., have been investigated, so that volumes of information are available. In fact, some fairly definite knowledge as to the comparison of terrestrial and celestial iron is afforded by heavenly bodies coming through space to this earth of ours.

Those who purchase and use wool in manufacturing will subscribe to the statement that there are no two lots of wool alike. Some appreciation of the reason for such a statement can be gained when it is considered that we are dealing with a substance, or mixture of substances, the chemical structure of which is unknown. Analysis may show the actual chemical components, such as carbon, oxygen and nitrogen, but the constitution is still a mystery.

Analysis of Raw Wool

Raw or unscoured wool is a very different material in appearance than the stock which enters the carding operations preliminary to cloth manufacture. It contains wool fat, suint or wool perspiration, vegetable matter such as seeds, burrs, etc., and earthy matter such as sand. The composition of these extraneous matters is of interest primarily to the scouring mill, and not necessarily to the user of the clean wool. It is because of the presence of such things that wool shrinks. After scouring, many wools yield as little as 30 lbs. of clean wool to 100 lbs. of greasy wool. This is illustrated by the following analysis:

Earthy matter deposited by washing the wool in water	26.06%
Suint or yolk soluble in cold distilled water	32.74%
Neutral fats soluble in ether	8.57%
Earthy matters adhering to the fat	1.40%
Wool fibre	31.23%
	100.00%

In general, there are two methods of washing and cleaning wool, by far the more common being the introduction of the greasy wool into successive bowls, each containing a solution of soap and soda in water. The wool passing through these successive machines comes out the other end clean and white ready for the drying operation. The other process is the pretreatment of the greasy wool with a solvent, and it is only by this method that the pure wool grease can be recovered.

Wool Grease

Wool grease is mostly to be found as the external coating on the fibre, which serves to protect it from mechanical injury while on the living animal. Such wool grease, when recovered by a solvent method, makes a material called "lanolin," which, because of its high emulsifiable power, is largely used as a basis for ointments. Wool grease is found to consist chiefly of a material called cholesterol, which, on isolation, appears as a solid, wax-like substance readily emulsifiable in water.

It is the practice of some scouring plants to recover the wool grease from the scoured wools. It is sometimes true that this action is required by health authorities prior to discharging the industrial waste into the sewer or river which may be unfortunate enough to receive it. In such cases, the dirty scouring liquors are settled and collected in tanks and treated with sulphuric acid. This breaks up the liquor, and there accumulates a layer of fat consisting of wool grease, as well as fatty acids from the soap used in scouring. This layer of fat is led to filter beds, and the magma which gradually collects after drying out is pressed in hydraulic steam presses. The oil recovered is a dark brown fat, solid at ordinary temperatures. It is sold as "degras," and is used primarily in the leather and rope industry, as well as a basis for ointments in which color is no particular object.

Suint

The suint or dried perspiration which adheres to the raw wool fibre consists principally of the potash salts of various fatty acids. Because of its solubility, it can be easily removed by steeping the raw wool in luke-warm water. During the war, when potash salts became so scarce, there were sporadic attempts to commercialize this process, but the potassium thus recovered is contaminated with sodium salts, and its subsequent purification is so expensive as to render the process impractical except under such extraordinary conditions as were brought about by the war.

The earthy matter which adheres to the wool is not, of course, a part of the wool at all and differs depending on the location of the growing sheep.

Ultimate Analysis

This leads to the question of what is pure wool, and the purpose of this article primarily is to discuss the chemistry and physics of commercially scoured wool. Its ultimate analysis shows the presence of carbon, hydrogen, oxygen, nitrogen and sulphur. This last is what distinguishes its composition from silk and all other textile fibres. On an average, its composition may be taken as follows: Carbon, 50%; hydrogen, 7%; oxygen, 22%-26%; nitrogen, 15%-17%; and sulphur, 2%-4%.

Probably several other substances in no way related to wool have the same general or ultimate analysis. Further inquiry shows, however, that wool reacts in general in such a manner that it may be classed as a proteid and particularly known as keratin. Other proteids are albumin, casein and gelatin. Keratin is the substance of which hoofs, finger nails, horns, hair and feathers are composed.

Nitrogen in wool is made evident by the odor of the burning fibre. This test is commonly made use of to distinguish it from silk and cotton. The wool has a characteristic odor on burning, due to the nitrogenous animal matter present.

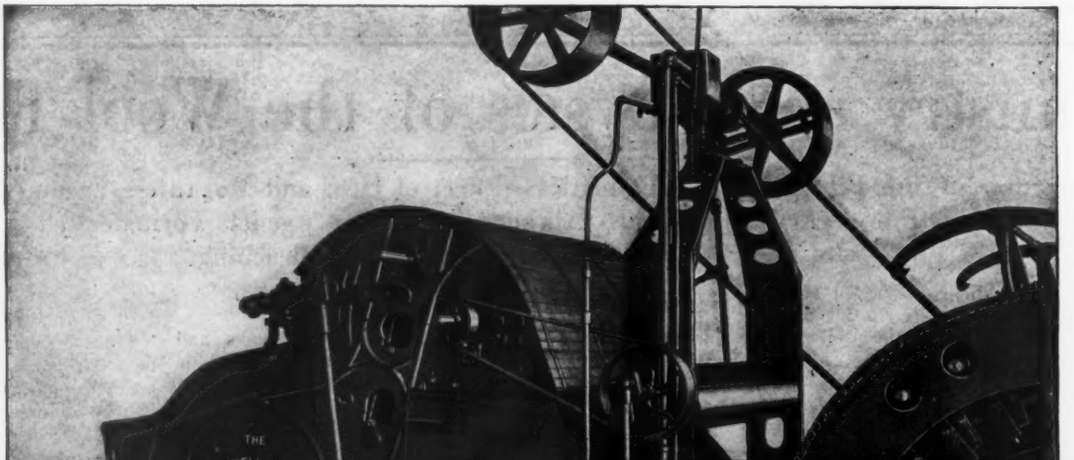
Sulphur is the constituent which makes wool unusual in the textile fibres. It is similar to the albuminoids in that it contains a relatively small, though widely fluctuating, amount of sulphur. Different samples will show from .8% to 4% of sulphur. The manner in which sulphur exists in the molecular structure of the fibre is by no means clear, as the majority can be simply removed without any apparent structural modification of the fibre itself. This appears to indicate that the sulphur is probably present in two forms, one of which is an ultimate constituent of the fibre, and the other or larger part is present as a more loosely combined compound.

The chemical reactions appear to exhibit the characteristics of both acids and bases. The acid nature of wool accounts for the possibility of formation of the compounds with various metallic salts, advantage of which is taken in the mordanting or preparation of wool with chrome for certain classes of dyestuffs. It is also possible to show that a certain amount of alkali can be absorbed and neutralized by wool.

Chemicals and Reagents

In the course of the conversion of the greasy wool into the finished cloth, it necessarily comes in contact with many chemicals and reagents often under conditions of considerable temperature. The mere drying of wool after scouring involves the effect of heat on wool.

If wool is heated in a dry atmosphere, over the boiling point of water, it loses its natural or hygroscopic moisture and the fibre becomes rough, harsh and brittle with a great decrease in tensile strength. If left in the air,



Harwood Spencer Automatic Stock Oiling Machine

For years practical mill men have appreciated the importance of properly oiling stock. In the old days the work was done by hand—but it was impossible to get uniform results. Hand oiling is too tedious a proposition to expect a man to put exactly or approximately the same quantity of oil on each batch of stock.

The machine shown above has eliminated slip-shod methods. The oil is applied uniformly because the machine is automatic. Another feature is that it requires no floor space as it is set in position on the feed table between the picker feed and the picker.

Complete information gladly furnished on request.

GEO. S. HARWOOD & SON

53 State Street, BOSTON, Mass.

it will regain moisture again and some of its softness and strength. If wool is heated in a moist atmosphere to the same temperature, it becomes plastic and the form to which it is shaped becomes permanent when later cooled. This property is the basis of the crabbing and pressing of wool fabrics as well as the shaping of felt hats.

This illustrates the fact that the relations of wool and heat are complicated by the third factor of moisture. Textile materials develop considerable heat when absorption of water occurs, and it has been proved experimentally that the regain of moisture by the bone dry fibre depends rather largely on the temperature.

Regain

The first commercial application of the property of regain occurs in the scouring of wool. After the scouring and drying operations, wool is usually stored or allowed to condition, or in other words to regain moisture from the surrounding atmosphere until it is in a condition of moisture equilibrium. This will vary, depending on the temperature and humidity of the atmosphere.

The relative humidity of the atmosphere is the ratio of the vapor pressure existing at any time to the maximum or saturation point for the prevailing temperature. The sensation of dryness or dampness of the air depends on this ratio. So also does the absorption of moisture by a mass of wool fibre. In England a very definite allowance is made for moisture in wool, while in this country there is no commercial law or agreement except that 12% is considered the normal moisture content of wool. There are tables published by English authorities which are the result of comprehensive tests for a period of years. The absorption of water by wool is a reversible process, in so far as, if the atmosphere becomes dryer, the water is released in whole or in part according to circumstances.

If wool is immersed in water, it first absorbs the liquid, and, as is usual in colloid substances, swells up in the process to a limit which is far beyond the limit of the atmospheric regain. That is to say, the wool has reached the gel or swollen hydrated colloid state. This maximum saturation value has been proved difficult to determine, but if a wool has been immersed in water for a time sufficient to reach this maximum and is then removed, the water may be regarded as held in the following ways:

1. Mechanically entangled within the fibre itself. If such wool is put into an extractor and whizzed, a great deal of this water can be thrown out. This question is important for practical application in the proper length of time to operate a centrifuge. It seems that in both wool and cotton the limit of removal of this mechanically held water lies at about 45% to 50%. Above this, mechanically held water will be expelled, but water held by other means can only be partially removed by either centrifugal or other forms of mechanical drying.

2. Water is also held by the wool fibre on its surface as a liquid layer or film.

3. Water which has penetrated the tissue of the wool fibres and caused the swelling of the wool substances can be called colloidal water. This in wool reaches a maximum of 30% to 40% of the original volume.

4. Some part of the water is present in the colloid in a more intimate combination, and possesses strong affinity for the molecule of the wool substance. This is similar to the water of crystallization of an ordinary chemical salt, and its complete removal constitutes such changes that the wool fibre may be unable to resume its normal state. Complete removal destroys the absorption qualities of wool to a large extent.

Conditioning machines are also used for cloth after drying whereby the cloth, hot from the finishing operations, passes through machines in which the air is completely saturated with moisture. The goods come out at the other end cooled; and, to a large extent, the normal moisture content has been picked up. As stated previously, the effect of high heat in the presence of moisture produces a very different effect on the wool fibre.

Action of Acids

The wool when treated with dilute acids does not appear to undergo any appreciable change. Although a certain amount of acid is very readily absorbed, acids are held in such a form that continued washing does not entirely remove them. It is probable that the acid is retained permanently by some form of mechanical absorption or combination. Dilute hydrochloric and sulphuric acid affect wool in a similar way, namely, by increasing the affinity of the fibre for acid colors and decreasing the affinity for basic colors. Prolonged boiling with dilute acids decomposes the wool.

In common with most other organic substances, cotton is totally destroyed by the action of concentrated mineral acids. The basis of carbonizing is the ability of wool to withstand the action of H_2SO_4, even in its concentrated form for a short time. The sulphuric acid acts on the cellulose of vegetable fibres which may be present in wool. On drying, the cellulose is thus destroyed, but the wool to a large extent retains its original properties.

Wool has an avidity for most organic acids, but tannic acid is an exception. To set tannic acid in wool fibre, a treatment with some substance like tartar emetic is necessary.

Action of Alkalies

Wool is completely destroyed by a 5% solution of caustic soda at the boiling temperature. The weaker alkaline salts, such as sodium carbonate, do not have this deleterious action at low temperatures. At high temperatures and concentrations, very serious corrosion of the fibre takes place. The peculiar reaction takes place with concentrated caustic soda in the cold for short times, whereby the wool actually becomes stronger. As soon as the temperature rises, however, complete solution of the fibre takes place.

Through the microscope, an examination of the treated fibre shows the individual scales of the surface of the wool to be more or less fused together to a smooth surface. Continuation of the treatment shows the wool gradually swelling and then falling away to complete disintegration.

Ammonia, ammonium carbonate, borax, sodium triphosphate, and so on, do not harm the wool and are consequently used in scouring wool in connection with soap.

Oxidizing Agents

Oxidation is the basis of the bleaching of wool. Hydrogen peroxide either sold directly or prepared from sodium peroxide is a most effective bleaching agent, whereby the coloring matter or pigment of the wool is destroyed. It is particularly valuable because the peroxide has no bad effect on the wool fibre itself.

Potassium permanganate is a powerful oxidizing agent, but is rarely used for bleaching purposes.

Wool may also be bleached by the action of sulphur dioxide produced by burning sulphur. The old-fashioned method employed by many mills is to festoon the goods in a tight house and burn sulphur in an iron dish. The sulphur combines with the oxygen of the air to form sulphur dioxide gas, which in turn dissolves in the water contained in the goods to be bleached. The sulphurous acid (H_2SO_3) thus formed is the active bleaching agent.

While chlorine is the most extensively used bleaching agent for cotton, it cannot be used for this purpose on wool because of its most peculiar action on this fibre. By moist chlorine gas, wool is completely decomposed; but in a weak solution of hypochlorite, such as is formed by chloride of lime, it absorbs chlorine and becomes altered in a most unusual way. The fibre becomes harsh, takes on a high luster, acquires a scroop, and completely loses its felting qualities, but it attains an additional attraction for coloring matter. Chlorine finds some use in the manufacture of a nonshrinkable woolen underwear. The property of lustering wool by this method finds application in the lustering of Oriental rugs.

Action of Formaldehyde

The presence of formaldehyde in an alkaline bath to a large extent protects the fibre from the corrosive action of alkali. Advantage of this is taken in dyeing wool with sulphur colors, which require the presence of strong alkaline sodium sulphide.

Metallic Salts and Mordants

Wool does not absorb the neutral salts such as sodium chloride, glaubers salt, etc., to any appreciable extent. Some of the more reactive salts, such as potassium nitrate, are affected because the wool has acted as a reducing agent, depriving the salt of a molecule of oxygen.

Wool is very reactive with the salts of the heavy metals, such as salts of aluminum, iron, chromium, copper and tin. On this property is based the methods of mordanting wool with various metallic salts in preparation for its dyeing with certain classes of dyestuffs. The mordant which finds most extensive application is chrome, usually sodium dichromate. On boiling wool with a solution of sodium dichromate, the fibre actually absorbs a certain portion of chrome in compound. The wool fibre apparently has a reducing action. This action is accelerated by the presence of acids and certain organic compounds, usually sulphuric, tartaric, lactic, and formic acids.

The treatment with tungstic acid is used in the moth-proofing process.

Weighting of Fabric

In the old days of silk manufacture, the most valuable dyer was the one who could make 2 lbs. of silk appear where only one went into process. This was done by loading the silk with tin salts, according to many long and complicated formulas which were passed from father to son as valuable trade secrets. This, of course, was mere adulteration, and it is probable that grandmothers in these days do not care for the heavily weighted black silk dresses which were the most highly prized possession of the old ladies not so long ago.

For some types of fabrics made from wool, it is desirable and even necessary to add weighting materials to impart certain desirable qualities. This is achieved by using certain chemicals such as magnesium chloride, useful because of its hygroscopic properties, glucose, glycerine, etc.

Color of Wool

In a previous article it was shown that wool varied from a fairly white substance to even gray and black, and that this coloring substance was distributed in the medulla in the form of granules. Ordinary wool, however highly selected, scoured and bleached, is not a pure white substance in the sense that bleached cotton is white. In bleaching with sulphur, a very fair white can be obtained, but not permanently. On exposure to the air some of the original color returns with consequent yellowing of the wool. On the other hand, hydrogen peroxide provides a permanent bleach. Browning of wool may result from exposure, dry heating, steam, boiling with water, and action of alkalies and strong acids. Therefore, it is necessary to avoid an excess of any of the processes of crabbing, mordanting, dyeing, hot pressing, and calendering; and in general it may be said that all alkalies produce in wool a yellowing or browning effect.

NINETY-SIX, S. C. The Ninety-Six Cotton Mill has let contract for erection of a school building which will cost $40,000. The work will begin at once. The building will be one story and will contain four classrooms, an auditorium with a seating capacity of 225 and a library.

Dependable All Ways - Always!

Confidence

NOTHING gives the Designer of Worsteds as much confidence as the knowledge that the Colored Spun Silks he selects for his samples will *retain* their shade and lustre and attractive character after processing.

We can be of SERVICE to you. Communicate with us.

American Silk Spinning Co
Providence, R.I.
New York Office 1 Madison Ave.

Variations in Yarn Structure

Characteristics Imparted to Woolen and Worsted Yarns by the Various Systems of Manufacture—Effect on Fabric

By Brompton

THE relation of yarn structure to cloth structure is not given the study by spinners that it ought to receive. Yet, few need to be reminded that in the structure of a thread we have, to a large extent, the character and general appearance of the woven or knitted fabric. The spinner who takes up this study to anticipate, if possible, his customer's requirements, or to further enhance the value of his customers' products, is sure to succeed, rather than the spinner whose hand has to be forced to bring about any improvements.

Yarns vary in structure to a marked degree. Beginning with widely different threads as our first examples, we have this clearly shown. Compare a typical woolen thread with a typical worsted thread, and we see fundamental differences in structure, which result in fabrics differing widely in appearance and utility. This is as true when the original materials composing both threads are the same, as when they differ. The method of treatment has been different, and the structure of the yarn is paramount in importance from the fabric standpoint.

Mule and Frame Spun

Woolen yarns can be divided into two great classes, according to structure; viz., mule spun and frame spun. Just as similar materials may become either woolen or worsted, so similar materials may be either mule or frame spun. There is no chemical or mechanical change effected in the structure of the fibres in converting them to yarn. The treatment to which the material is subjected produces, by mechanical means, a change in the relation of the fibres to each other, which forms the essential difference between these yarns.

Further, the yarn structure, characteristic of both these yarns, is entirely produced in one operation—spinning. The condensed slivers may be identical, but if one yarn is spun on the mule, and the other on the continuous frame, there is a difference between them, though both are woolen yarns, judged from the intermingled arrangement of the fibres.

The differences between these two yarns are as follows: The mule-spun yarn has a dense core of fibres, due to the yarn receiving twist during drafting. This solidifies the central fibres, and gives to the confused mass a degree of compactness. But the absence of roller drafting allows short fibres to keep a position outside the regular order of fibres in the center of the yarn, with the result that the yarn is fluffy or bulky. Thus, a mule spun yarn can be recognized by its orderly arrangement of fibres in the pith of the thread, and the confused and clustered projecting fibres on its surface.

The frame-spun yarn has its fibres in more parallel order. This structure is suitable for the production of fabrics in which the designer wishes to exercise his art in smaller and clearer patterns, and produce cloth more distinct in weave. The frame-spun woolen yarn approaches more nearly to the worsted yarn character, especially when produced from material above the average length used for woolen. Frame spinning is more suitable for thick counts, by reason of its more accommodating draft.

Structure Indicated

Woolen yarns are usually named in England according to the style or class of material used. Familiar names are saxony, cheviot, and low woolens. But attached to these we have now the name which indicates the structure, such as mule-spun saxony, frame-spun cheviot, etc. If frame and mule-spun yarns were used together indiscriminately, pieces would be spoiled by being filling barred or warp rowed.

Woolen yarns vary from the very rough type, produced by intermediate feeding, mule spinning, etc., to the smoother frame-spun yarn. The degree of roughness or the yarn structure desired depends largely upon the designer or finisher. They are responsible for the final appearance of the cloth, to obtain which the right kind of yarn must be used.

The difference between woolen and worsted yarns is based on the yarn formation. A yarn in which fibres are parallel is worsted, and one in which they are entangled is woolen. Briefly stated, yarns made from combed wool are worsted; from uncombed wool, woolen. There is one noted exception to this last rule, viz., carpet yarns, which, though made from uncombed wool, are yet worsted. This is classified as a worsted yarn, as it passes through all the drawing processes and, by gradual elongation between rollers, becomes smooth in appearance. This yarn may be said to be the nearest approach to woolen among worsted yarns, yet the difference between the two is obvious.

The yarn structure for carpet manufacture has been studied and the best yarn, all things considered, is the carded yarn, that is, the uncombed worsted yarn. What is wanted for carpets, among other things, is a cheap yarn; and to cut out combing with its double cost, i. e., cost of combing and loss of noil removed, makes considerable difference in price. Again, allowing the short fibres to remain gives to the yarn a fuller handle, which is also desired. The use of these yarns has extended to cloth manufacture, but yarns similar to these, though not as good, can be made on the woolen system, and, being usually cheaper, are usually preferred.

There are four classes of worsted yarns, one mule-spun and three frame-spun yarns; viz., cap, flyer and ring. This classification deals only with the construction of the yarn, depending upon the style of spinning used. These classes can be extended in number by differentiating between French-drawn, cone or open-drawn, followed by one of the spinning methods. Thus we may have the following sequence of operations:

French-drawn and fly-spun.
French-drawn and cap-spun.
French-drawn and mule-spun.
Cone-drawn and cap-spun.
Cone-drawn and ring-spun.
Cone-drawn and flyer-spun.
Open-drawn and cap-spun.
Open-drawn and ring-spun.
Open-drawn and flyer-spun.

Assuming that all these operations were conducted on similar materials put through each, we should obtain nine types of yarn, varying much between the extremes, and slightly in the average. An interesting study in yarn formation is presented here, and practically the whole ground is covered, so far as spinning is concerned.

We should probably find the extremes in the French-drawn mule-spun, and the open-drawn cap-spun. In the former, we should have a yarn which, while retaining the true worsted thread character of smoothness, would combine softness and fullness of handle, and yield a yarn "foody" in use, either for knit goods or weaving. In the French-drawn mule-spun yarn, we have the result of organizing and co-ordinating all the processes of manufacture to obtain a definite yarn construction. These processes allow the use of materials which further enhance the full-handling property of the yarn. This is economically advantageous, as these materials are plentiful and cheaper than those used in the other systems of yarn manufacture. The longer clothing wools, skin wools, carbonized wools, droughty wools, B. A. and M. V. wools of irregular length are not impossible on the French-drawing mule-spinning machinery.

Wide Variation

The open-drawn cap-spun yarn will be much more compact than the French-drawn mule-spun yarn. No amount of care or ingenuity on the part of those in control will bring the former yarn within range of the latter. The mechanical structure of the two yarns is different, because in one there is the consolidation brought about by cumulative twist, imposed in each operation to overcome drag, and culminating in the cap system of spinning, which puts the yarns into the least area possible. In the other, the porcupine treatment keeps open the fibres and retains the bulkiness common to thick slivers, even in the final processes, where the sliver, though light, occupies a large area in comparison.

This is not lost in mule spinning, but the method of twisting allows the fibres to lie parallel to each other and yet without being compact.

It will be understood from the above paragraphs that mule-spun yarns vary from cap-spun yarns in two respects: (1) structure; (2) material used; but we venture to state that the former difference is more important and, to some extent, responsible for the latter. Mule-spun yarns can be used for all classes of wool textures, but their chief use is in making knit goods, and soft full handling goods.

Experiments have been made to produce the characteristic Continental yarn by following French drawing with cap spinning. The result was a yarn between the two. Further experiments tried were French drawing followed by flyer spinning. The yarn produced was more satisfactory than the French-drawn cap-spun yarn, but did not come up to the standard of the mule-spun yarn.

The flyer-spun yarn was also more costly than the mule spun, and developments are hardly possible in that direction, though one cannot be sure. Probably some firm, adopting this sequence of processes, may strike a successful line in cloth or knitted wear, and give an impetus to this method of yarn manufacture.

The nearest approach we have to the French-drawn mule-spun yarn, all things considered, including cost, is the cone-drawn cap-spun yarn. This is often used by the hosiery manufacturers when the other yarns are not available.

Want Compactness

For many purposes we can manage without French drawing and mule spinning. For many purposes they are unsatisfactory and almost impossible. Some yarns are required to be as close and compact in structure as it is possible to make them. Yarns required for lusters, linings, etc., from English wool up to 16 in. in length, and yarns required for glaces, brilliantines, sicilians, etc., from mohair and similar fibres, cannot be made satisfactorily on the French-drawing mule-spinning system.

For these we require the cumulative twist of open drawing, and the solidifying influence of twist and drag in frame spinning. Crossbred yarns of low and medium quality, when required for serges, etc., are often satisfactory when produced on open drawing, followed by flyer or ring spinning. Fine crossbreds (50s to 58s quality) need more care because of their shorter lengths. Open drawing and cap spinning produce a lean yarn. Much better results are obtained from cone-drawing, cap spinning, and still better results from ring or flyer spinning. For ordinary warp and filling requirements, cap spinning would no doubt be used, from the productive standpoint; but for hosiery yarns, ring and flyer spinning are advantageous. Thus, slight modifications in yarn structure are produced by varying the systems of drawing and spinning used. It was said by a spinner a few years ago, who had introduced cone roving in place of open, that he could see a

(*Continued on page 99*)

Women say—

"THE AMAZING thing about Celanese hosiery and undergarments is that there is so much life in them!"

Full of static electricity themselves, they are delightfully comfortable to the skin.

Also, they react to the electricity generated by the body and cling to the skin as a bit of paper clings to rubbed amber. No other fiber possesses this quality.

This is why, with Celanese hosiery, there is never any bagginess or bulging about the ankles.

Celanese hosiery keeps its form, which is the form of the limb it covers.

Celanese, dyed with its special SRA dyes, is fast to sun, soap, salt-water and perspirations. ¶Waterproof, highly elastic, remarkably durable, and with unique hygienic qualities. ¶Even in a plain fabric no shiners are ever found when Celanese is used.

CELANESE

REG. U.S. PAT. OFF.

BRAND YARN

Our dyeing and textile experts are at your service, ready to help you use Celanese to your profit. Ask us to send you our concise brochure: *What you should know about Celanese*

The AMERICAN CELLULOSE & CHEMICAL MANUFACTURING COMPANY, Ltd

15 East 26th Street, New York

WORKS AT AMCELLE (NEAR CUMBERLAND) MARYLAND

CELANESE is the registered trademark, in the United States, of The American Cellulose & Chemical Manufacturing Company, Ltd., to designate its brand of yarns, fabrics, garments, etc.

QUESTIONS AND ANSWERS

CORRESPONDENCE WITH READERS

Under this head, we undertake to answer, free of charge, to the best of our ability questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. In this way answers can be given which will be of immediate technical value to the correspondent and to others in the same line. Inquiries pertaining to textile processes, machinery improvements, methods of management, the markets, etc., are especially invited as well as any legitimate discussion on the views expressed. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as an evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

If the question is not of general interest to textile readers and involves expensive investigation, a charge covering the cost may be made, of which the inquirer will be advised before any expense is incurred.

Letters expressing opinions or voicing criticism will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld.—EDITOR.

Uneven Filling in Rayon-Filled Cotton Fabric

Technical Editor:

Please examine the enclosed sample of rayon-filled cotton fabric and state where the blame should be laid for the great number of horizontal streaks. (5567)

One edge of the circle marked on the swatch touches a shiner which is about 3 in. long, and the rest of the pick on which the shiner is located is perfect. The other edge of the circle touches a miss-weave or broken pick in the cloth. This is not a shiner. It looks to me as though the filling has broken or become exhausted and the weaver has failed to match the pick. The back of the cloth will show where the pick is broken better than the face of the cloth.

We do not know whether the fault is being found with the small shiner, the broken pick, or the irregularity in the size or count of the filling. If you are finding fault with the small shiner, the blame can honestly be laid on the quality of the filling. The fault of the broken pick can be laid to the weaver. The most serious fault in this swatch seems to be the irregularity of the size or count of the filling. The count of the filling seems to range from about 150 denier to about 100 denier. This can be seen by the naked eye and shows up glaringly under the glass. The quality of the filling is very poor.

The defective filling, as it appears in the swatch that was submitted, is visible to the naked eye, not as shiners, but as an irregularity in the diameter of the thread. If the fault was in the shuttle or loom, this irregularity would show for the period of one entire cop; for it is hardly logical to suppose that the friction in the shuttle would change during the weaving of one or two cops. The thread is very uneven, having a thick and a thin place for certain lengths. Weaving this cloth on a box loom would not remedy the defect, and, as a matter of opinion, we would say that weaving this filling on a box loom would make the cloth look worse than it appears in the swatch.

The thin places in the filling, where the thread appears off count, is woven loose with no appearance of too much friction in the shuttle. The thin threads have the same luster as the thick threads. It seems out of reason to blame a loom or shuttle for uneven sized filling. The picks from the same shuttle and cop will be placing many inches of filling in the cloth. Some of these picks are defective and some are all right. If too much friction is being applied by the shuttle, it is reasonable to expect the same friction from the beginning to the end of the same cop.

We are submitting a swatch with an 8 end sateen weave, same weave as in the swatch that you submitted. If this swatch was woven with defective filling, the thin streaks would appear as bad if not worse than those in the swatch that you submitted. You will note the even size of the threads in the swatch that we are sending you. This is not due to any particular care of the friction in the shuttles, but is due entirely to the quality of the artificial silk filling. The selvage on the swatch that you submitted is not the correct selvage for this type of weave, but this would have no influence on the body weave.

* * *

Leg and Foot of Silk Hose Differ in Shade

Technical Editor:

I am enclosing sample of fabric as made on a split foot machine. You will kindly note the high splice and foot is darker than the boot. On examining this fabric you will notice the tightness of stitch is the same in the high splice foot and boot, hence I am of the opinion the darkness in the high splice and boot is caused by the denier of the yarn of the silk from this cone of yarn being either less or greater than the denier of the yarn of the cone of silk used for the boot. I would be pleased if you would examine this fabric and verify my opinion as to why this hose is a substandard. (5577)

On close examination of this sample, we would say the difference is caused by a heavier yarn used in knitting the foot. The two different motions of the machine in knitting the leg and foot might make some difference, the one being circular, the other reciprocating. Proper choice of the yarns used and a uniform tension on the machine should overcome this defect.

* * *

Waxing Worsted Knitting Yarn

Technical Editor:

I am buying all my yarns wound on cones, as I do not have a winder. All this yarn is not properly waxed, consequently, I have all kinds of trouble in using it on the knitting machines. I have tied a piece of wax on the yarn stand so the yarn could run over it before entering the needles; but in time the wax wears through, and, as soon as a knot comes, the yarn gets caught in the wax and sometimes breaks. Could you tell me if there is some kind of a liquid wax or oil I could use through which I could run the yarn before it goes into the machine, or if there is some other way to wax the yarn? I am using all dyed yarns, worsted 2/20, 2/26 and wool 2/20 for sweaters and jerseys. (5576)

The writer does not know of any liquid waxing preparation for worsted knitting yarns. You might use the type of oiling device used on automatic hosiery machines. This consists of a small bottle with a wick projecting from the top over which the yarn passes. The oil in the bottle is drawn up by the wick and is in turn absorbed by the yarn. The quantity absorbed is dependent upon the speed at which the yarn is drawn over the wick.

Best of all, we think you could use a small waxing device sometimes applied to winders. This has a small flat surface with a post about one-half inch in diameter in the center. A small, flat, circular cake of wax is used. There is a hole in the center of the cake, large enough to fit over the post, so that the cake rests on the smooth metal surface and may turn about the post as a center. The yarn passes under the wax. The weight of the wax cake gives contact with the yarn. Freedom to turn overcomes the cutting into the wax at any one point. These may probably be obtained through manufacturers of winders.

* * *

Worsted Stock Yarn Shady

Technical Editor:

Owing to the slump in the worsted spinning industry, we have accumulated quite a large stock of yarn. From time to time we run the jack spools over to see if there is any trace of mildew, etc. We are at present running over yarn which has been in stock on jack spools for over twelve months. I notice that the yarn is very shady, possibly through the action of the oil in the yarn. Is it possible that the oil would have caused this effect? Is there a danger that yarn kept in stock for such a lengthy period will develop trouble in the dyeing through the action of oil and water that may have been added to the material in process? I would be grateful for any information you can give me on the subject. (5575)

It is quite common in the worsted spinning industry during slack times for mills to run on stock yarn rather than to close down entirely, and such yarn is always more or less a care during the time it is held. It needs frequent attention to prevent deterioration, and is usually disposed of at a few cents under the market in order to get rid of it. If your yarn is standard, as to counts and quality, the fact of its being shady arising from the oil or other mixture used during the process of manufacture will not cause any trouble in the dyeing, providing it is used for dark shades only. To use such yarn in goods of light or delicate shades would be very unwise, as it would certainly invite trouble.

Editor, TEXTILE WORLD:—

We acknowledge receipt of your kind letter of the 24th inst., and thank you for sending us the samples of pajama check, as also the inquiry from ————.

Appreciating your courtesy, we are,

Yours very truly,

Cone Export & Commission Co.

(Signed) J. W. S.

Cotton and Rayon Sock Unevenly Dyed

Technical Editor:

I am sending you a sock which is stained on the high spliced and double sole. This is due to the fact that the cotton used protrudes from the artificial silk, and once the sock is dyed the difference in the color of the cotton and the artificial silk is plainly shown on the high spliced heel and double sole. It is a very noticeable defect. The yarn used in the sock referred to is artificial silk No. 300, and mercerized cotton 60/1. Please explain how to avoid this defect? Also kindly inform me what kind of oil to use in a circular knitting machine, so that it may be dried and washed thoroughly without staining the sock? Olive oil has been recommended to us. (5574)

From all appearances you are not using the proper dyestuff for coloring your hose; or, if you have the proper color, your temperature is not correct, as the cotton yarn shows up darker than the rayon. As a rule, artificial silks are dyed in more dilute baths than other textile fibres, with less addition of salt and without high temperatures, keeping down the alkalinity and mineral acidity of baths. Therefore, dyestuffs must be carefully selected in order that these conditions will exist in dyeing. You must find either by experiment on your part, or by submitting your problem with samples of your hose before processing to the application laboratory of a dyestuff company, the proper color and temperature which will dye your cotton and rayon yarns the same shade.

In regard to an oil for use on a circular knitting machine, would state that olive oil is good, as it will wash out with soap. We believe you should also get in touch with a good oil company, as they usually have a compounded oil which they call a stainless oil, at a cheaper price and yet just as efficient.

* * *

Uneven Shades on Mercerized Stockings

Technical Editor:

We are enclosing one pair of mercerized stockings in which you will note the two shades in the one stocking. We are having a great deal of this trouble in all of our shades. For your information, we have tried various methods and have been unable to overcome this trouble. For instance, we have boiled the goods in a strong bath of soda ash before dyeing and have also tried boiling out in caustic soda. The goods which we are sending were worked as follows: Goods were entered cold and brought to a boil and boiled 15 minutes and dye added, run for 45 min., salt added and run 15 min. We obtained in this lot three distinct shades; i. e., one stocking would be dark all the way through the stocking, another stocking would be a shade lighter, and another stocking would be still lighter. A good many stockings come out such as the one we are sending. Any information you can give us on this subject will be greatly appreciated. (5573)

The trouble is not due to the method of dyeing but in the grade of yarn that is used. From the samples, it looks very much as though two or more dif-

PATENTS PERTAINING TO THE MANUFACTURE OF ARTIFICIAL SILKS

The following patents owned by The Chemical Foundation Incorporated are available by license to American manufacturers:

NITROCELLULOSE SILK

1,093,012—Process for the preparation of Nitrocellulose.
1,168,164—Derivatives of Cellulose containing the residue of an Organic Acid and Nitrogen and process of making same.
1,248,933—Process of utilizing the Washwater of the manufacture of Nitro-Cellulose.

CUPRO-AMMONIUM SILK

945,559—Process of producing solutions for Spinning Artificial Threads and the like.
962,769—Method of manufacturing Cellulose Structures.
962,770—Process of producing durable Solutions for Spinning and other purposes.
979,013—Process of manufacturing masses for use in making Artificial Threads and the like.
983,139—Manufacture of Filaments, Films and other Cellulose products from Cellulose solutions.
988,430—Process of manufacturing Artificial Threads.
1,000,827—Process of making Salts of Hydrated Cupric Oxid.
1,022,097—Process of manufacturing fine Artificial Threads.
1,023,548—Method of recovering Ammonia in the Cuprammonium Cellulose precipitation.
1,030,251—Process for producing Cellulose products.
1,034,235—Process of manufacturing Artificial Threads.
1,049,201—Process for recovering Copper from the Wash Liquors employed in the Cuprammonia Cellulose process.
1,062,106—Process for producing Cellulose Formations.
1,064,260—Process for the manufacture of Cellulose Solutions.
1,066,785—Manufacture of Artificial-Silk Threads from Cellulose.
1,105,077—Process for the production of Shaped Articles from Copper-Ammonium Cellulose Solution.
1,421,707—Process of Preparing a Permanent and Spinnable Solution in the Cupricammonia Process.

VISCOSE SILK

960,100—Compound for producing Silk-Like effects.
980,648—Method of producing stable soluble Cellulose Derivatives from Viscose.
1,073,891—Process of manufacturing Artificial Lustrous Threads, Bands and Filaments.
1,074,881—Dry Viscose in a Granular, soluble and stable condition and process of preparing the same.
1,102,237—Process for the production of Threads, Films or Plates.
1,121,605—Method of manufacturing a Viscose Solution from Wood-Cellulose.
1,121,903—Process of manufacturing Artificial Lustrous Threads, etc.
1,200,774—Treatment of Cellulose Derivatives.
1,292,544—Process for the precipitation of Viscose for the production of Artificial Threads and other Structures.
1,355,985—Process for the manufacture of Viscose.
1,379,351—Process of making Cellulose Xanthogenate Solutions and product produced.
1,414,070—Process for the manufacture of Lustrous Threads from Crude Viscose by means of Warm Mineral Acids.
1,428,246—Process for Producing Spun Material resembling Wool, Cotton, or Chappe from Viscose solutions.

CELLULOSE ACETATE SILK

922,340—Manufacture of objects from Cellulose Acetate.
954,310—Process of producing Acetyl-Cellulose-Coated Material.
999,236—Process for preparing Cellulose Esters in definite forms.
1,028,748—Filaments and other products obtained from Cellulose Compounds.
1,069,445—Process for Acetylating Cellulose and its products of transformation.
1,090,074—Compounds or Derivatives of Cellulose and process of obtaining the same.
1,109;512—Process of making a Cellulose Acetate soluble in Ethyl Acetate.
1,173,931—Process of producing Coating Compositions of Acetyl Cellulose.
1,201,260—Process for the manufacture of Cellulose Esters.
1,241,995—Modifying Acetyl Cellulose.
1,263,119—Cellulose Acetate and a process of making same.
1,296,847—Process for making Cellulose Esters with over 20% of bound Fatty Acid.

CELLULOSE FORMATE SILK

953,677—Cellulose Formate.
955,082—Cellulose Formate.
1,029,341—Transforming Formyl Esters of Cellulose or Solutions of the same into stable Plastic Solutions.
1,046,729—Process of producing Formyl Cellulose.
1,055,513—Production of Viscous Cellulose Solutions.
1,061,977—Process for the production of Formylcelluloses.
1,153,596—Non-Inflammable Celluloid-Like mass and process of production thereof.

OTHER FORMS OF ARTIFICIAL SILK

904,269—Producing Glossy or Silky effects on Fabrics and other material.
930,874—Cellulose substitute.
942,395—Method of Improving Textile Fibres, Threads, and Fabrics.
973,253—Method of producing Incandescent Mantles.

APPARATUS USED IN THE ARTIFICIAL SILK INDUSTRY

957,460—Machine for Spinning Viscous Liquids.
1,020,117—Process for imparting Lustre to Yarns, Fabric and the like.
1,209,465—Apparatus for leaching and rinsing Mercerized Fabrics and recovering the Lye.

MISCELLANEOUS PATENTS RELATING TO CELLULOSE ESTERS

902,093—Process of Separating Cellulose Esters from Solutions.
1,037,158—Process of manufacturing substitutes for Oils, Caoutchouc, Resins and the like.
1,141,510—Process of preparing solutions of Cellulose.
1,188,376—Alkyl Ethers of Cellulose and process of making the same.
1,217,027—Film and process of producing same.
1,217,028—Manufacture of artificial Textile Material and process of producing same.
1,350,820—Alkyl Ether of Starches and similar Carbohydrates and method of producing the same.
1,414,076—Spinning Viscous Liquids in Flowing Feeding Liquids.

PATENTS RELATING TO WOOL SUBSTITUTES

1,383,742—Process for Manufacturing a Wool Substitute from Cellulose and Similar Solutions.
1,428,246—Process for Producing Spun Material resembling Wool, Cotton, or Chappe from Viscose solutions.

DYEING OF ARTIFICIAL SILK

961,241—Dyeing Acetyl Cellulose.
979,966—Process of Dyeing Acetyl Cellulose.
1,002,408—Art of Dyeing Acetyl Cellulose.
1,169,267—Dyeing Artificial Silk.

The Chemical Foundation Incorporated

(Chartered for the Advancement of Chemical and Allied Science and Industry in the United States)

DEPT. 220 85 BEAVER STREET, NEW YORK CITY

Correspondence with Readers—Continued

ferent kinds of yarn are being used by your knitter. Or the trouble might be due to uneven mercerizing in the yarn, which is always very pronounced in the dyeing operation. If you are using more than one grade of yarn, be careful to keep them separate in the knitting and dyeing operations, and your trouble will be eliminated.

* * *

The Tennessee Power Situation

CHATTANOOGA, TENN.

EDITOR TEXTILE WORLD:

Sometimes I wonder if the people of the South have a keener sense of humor than our brethren of the East, and whether or not the brethren of the East haven't a longer vision than we of the South.

The editorial appearing in TEXTILE WORLD, Oct. 10, "What the Drouth Means," really suggested this letter. The proposed monument to the boll-weevil was evidently intended at the beginning as a joke. It was taken seriously by the press East. The drouth itself was simply an exemplification of the old saying that "it is an ill wind that blows no one good." The two Carolinas, Georgia, Alabama, southwest Virginia suffered severely on account of the drouth. The local demand for power in the Chattanooga district was 35% greater in July, August and September than in any previous period of the operation of the Tennessee Electric Power Co. Mark you, I say any period; also, I say local demand. In addition to the heavy local increase, the Tennessee Electric Power Co. delivered to the Georgia Light & Power Co. its surplus power; that, but for this delivery, there would have been greater distress in the States referred to above.

Our textile people have been running continuously without so far as I know an hour's shut down.

I met one of your good friends, the treasurer of a local textile mill, on the street Tuesday of this week. He made this statement to me: "I know you will be pleased to learn that this has been so far the greatest year in the history of the company." You know him, he is a man who does not gush, neither does he get his facts mixed with romance.

Speaking of power: More and more as I grow older, I have from experience, learned to attribute the best motive to all men and all combinations of men, and corporations are combinations. About the middle of September the drouth was terrific. I have made two or three trips in a section where it was even greater than in the Chattanooga district. I became alarmed lest it interfere with the operation of our different manufacturers. More on account of their labor than for the owners themselves. With this fear in my heart, I wrote one of the officials of the Tennessee Electric Power Co., asking for inside information. He stated that his company was delivering 35% more power to their Tennessee consumers than ever before, that they were delivering to the Georgia company a large supply of surplus power; that in order to do this every steam plant in the system as well as the hydro-electric plants, were operating to their capacity; that "the company and its employes were leaving no stone unturned to meet whatever the conditions, and thus avoid widespread loss both to labor and owners."

The public doesn't always give corporations credit for such devotion to their jobs of serving the public. Had our plants been forced to close down, it would have caught the owners, the operatives, the merchants, the professional men and even the preacher.

So there is at least one spot in textile production that did not aid in a reduced product. And I doubt exceedingly whether the users of electric power in this section in any form have given a thought to the care given them by the power company. I doubt if I should have thought of it but for the distress that I noticed in other States, which suffered far greater from drouth than did this particlar section.

CHAS. W. HOWARD,
Manager, Industrial Board,
Chattanooga Chamber of Commerce.

* * *

Specks in Woolen Goods

Technical Editor:

We are running 1/28 cut yarn A. A. super wool in heather mixes, using about 25% to 35% of the wool white, and the balance dyed various colors. We are running same on a 60 x 60 card, using 32, 33 and 34 gauge wire on the first, second, and finish breakers respectively. We are not using the tape condensers. Our difficulty lies in the fact that when the cloth which is made from this yarn is finished, a number of white woolen specks are in evidence, which require considerable hand speck dyeing to eliminate. We are unable to card these small specks out, and trust that you can give us some advice which will enable us to make things right. We are not using noils nor reworked stock. (5563)

It may be that there is present in the wool some short undergrowth which is oftentimes the source of such difficulty. Set the card closer to thoroughly card out and blend the stock. The fancy on the card may be responsible for the specks, which may not be noticeable unless carefully looked after. Owing to the fact that the larger part of the stock is colored, the white would not show up prominently until after the goods are washed.

* * *

Cotton Yarn Production Classified by Count

Editor, TEXTILE WORLD:

What is the annual cotton yarn production of the United States in the different counts? I would include both weaving and sales yarn mills. If specific figures are not available will you estimate as closely as possible? (CD134)

The latest figures available approximating what you wish are for the census of the year 1919, these being tabulated as 20s and under (or coarse); 21s to 40s (or medium) and 40s and over (or fine). These figures with their totals are found in the accompanying table.

The latest census of cotton manufacturers, that of 1923, contains no such tabulation by yarn counts, but we have attempted to base an approximate estimate by yarn counts upon the total pounds of yarn produced that are given in the 1923 census and also upon our knowledge that there was a considerable decrease in production of number 20s and under that year as compared with 1919. This was due in large part to the fact that the Government was still disposing of considerable quantities of surplus war duck and other coarse goods; we also know that the automobile tire trade was not taking as much new fabric from the mills as in 1919.

There is further substantial evidence of the rise of the average count of yarn spun during 1923 in the fact that square yards of cloth produced increased a little over 30%, or from 6,000,000,000 in 1919 to 8,264,000,000 in 1923.

Based upon these assumptions we have distributed the increase in pounds produced in 1923 over 1919 of approximately 20% as follows: 20s and under, 25%; 21s to 40s, 50%; 40s and over, 25%.

The figures above referred to on production in pounds of cotton yarn for 1919 and 1923, including both yarns for a mill's own consumption and for sale, follow:

	1919	1923
Total	2,346,854,120	2,832,884,220
20s and under	1,132,730,389	*1,341,737,914
21s to 40s	1,062,731,673	*1,300,746,623
40s and over	161,392,158	*280,399,683

*Estimated.

* * *

Running on Stitch by Stitch on Circular Machine

Technical Editor:

We would like to get some information on how to run on stitch by stich on a flat circular machine. We would like to know if this is done successfully on artificial silk. (5569)

In running on stitch by stitch on a plain circular machine, one course of loops should be followed as nearly as possible. In multiple feed machines, it is necessary to move ahead one course at various points as the work proceeds around the machine. The number of times to move ahead will depend upon the number of feeds on the machine. If these steps are distributed evenly around the machine, it will make the "press on" less apparent. This has been done some on the coarse spring needle machines for underwear. However, we believe the practice is not extensive even in the coarse gauges, and doubt if it is at all practical in the fine gauges commonly used for rayon products.

* * *

Oil Causes Yellow Tinge on Wool

Technical Editor:

We have trouble with lots turning yellow, a defect which shows up most prominently in white mixes. We first noticed it on bobbins in the spinning room, there being variations in the same mix. We take extreme care in mixing the lots in the picker room. We use a heavy lard or grease oil in the picker room, and with the most careful fulling and scouring we cannot get it entirely out of the finished pieces, which show a yellow cast on practically all of the finished pieces, giving them a dull, lifeless look. Enclosed find two reelings of yarn from same lot. You will notice one is more yellow than the other. Has carbon tetrachloride ever been used in the washer, and would it be practical? Is carbon tetrachloride superior to ether in removing stains at the perch? (5564)

From the description of your trouble it seems that the difficulty arises from the heavy lard or grease oil used in the picking room. It seems advisable to discontinue the use of this grade of oil and use a lighter grade of good saponifiable oil in the form of an emulsion of 50% oil to 50% water. It does not seem advisable to use tetrachloride in the washer, especially not on colored goods. Ether is considered milder in its action on the cloth than tetrachloride for the removal of stains.

* * *

Technical Editor, TEXTILE WORLD:—

We are this day in receipt of your favor of the 17th instant making reply to our inquiry of recent date relative to ——— ———, and thank you very kindly for the information given us.

Your assumption that the test was used in connection with yarns on bathing suits was correct, and for that reason will apply definitely to the problem we had before us.

Several of our bathing suit accounts have adopted various processes for ———, and it will be of interest to them to have a copy of your letter which we will forward to them, and take due note to give you credit for supplying the information.

Again thanking you for this favor, we beg to remain

Yours very truly,

OREGON WORSTED CO.
W. M. Jackson,
Production Mgr.

Estimate of Domestic Industry's Jacquard Looms

Editor, TEXTILE WORLD:

We would like to know the number of individual textile mills (including all classes) in the United States which are operating jacquard looms and the total number of jacquard looms in the industry. (CD132)

The United States census of 1919 which is the latest giving machine equipment of the textile industry does not list the number of mills having jacquard looms, nor does it give the jacquard looms in woolen, worsted and carpet mills.

The 1919 census figures for jacquard looms in cotton mills are 16,048, and in silk mills, 7,324. We estimate that in wool goods mills making dress goods, upholsteries, etc., there were 5,000 jacquard looms and in carpet mills, 7,000. The total of actual and estimated jacquard looms for 1919 is therefore 35,372.

We consulted authorities in the field and obtained an estimate of 500 mills operating jacquard looms including cotton, silk, wool and carpet manufacturers. We also have an estimate from an authoritative source of 38,000 jacquards in the country which acknowledges an underestimate of carpet jacquards. If an arbitrary 2,000 is added for this deficiency we arrive at an approximate current figure of 40,000.

* * *

Hosiery Mending and Looping

Technical Editor:

Will you please advise me what is the most difficult operation in the manufacture of ingrain silk hosiery, mending or looping? (5568)

This is a rather difficult question to answer, as the term mending may be construed to mean various things. Many mills have two mending operations—one for small holes and another for large holes. The former is usually more fussy than the latter, because the stockings with small holes are used as much higher quality than those with larger holes.

Looping is a straightforward operation which is much more mechanical than mending but requires considerable skill. The amount of skill varies with the fineness of the fabric, but this same variation in fineness enters in mending so that the problems of mending and looping keep in much the same position.

We would be inclined to class looping as more difficult than mending because it requires keeping to one course all the way around the stocking and making the loops match up correctly at the corners. It is an especially difficult task on ingrain hosiery where the colors are dark.

Detroit Graphite Company

DETROIT U. S. A.

DEGRACO PAINTS

All Colors for Your Particular Needs

Sta-White—Interior White Paint that stays white.
Building & House Paints for the mill and village.
Superior Graphite Paint—for the prevention of rust.
Brick & Concrete Paints.

Offices and Warehouse Stocks in all Principal Cities

FIG. 67

SHIPPING HAMPER

Flexible steel frame.
Strong canvas body.
Tough wood top.
Renewable wood shoes.

LANE

CANVAS SHIPPING HAMPERS

Embody qualities appreciated by the occasional mill that transfers goods in process.

Whether by motor truck, express or freight, great durability, protection to contents, smoothness and lightness are desirable.

All are found in the Lane shipping hamper.

Write for Catalog No. 90.

W. T. LANE & BROS. Mfrs. POUGHKEEPSIE, N. Y.

MILL NEWS

COTTON

New Construction and Additions

*Birmingham, Ala. The Strowd-Holcombe Cotton Mills, Inc. have started work on remodelling the recently acquired plant of the Preston Motor Co. into a cotton mill. Cotton flannels will be produced.

Columbus, Ga. The Columbus Mfg. Co. is making various improvements and enlargements to its plant here. Work includes an extension to the cloth room and installation of additional machinery.

Griffin, Ga. The Griffin-Kincaid Mills have abandoned their old offices in the Griffin mill and moved into a new office at the new plant near Experiment, Ga. In addition to a new office, the company has recently constructed a new school building and has installed a modern cafeteria for employes, where food is served at cost. A new bleachery has been constructed at the new Experiment mill and the equipment from the old bleachery at Griffin has been moved there, it being the intention of the company to turn the old bleachery building into a dye house in the near future.

Belmont, N. C. The Chronicle Mills are to be enlarged at a cost of about $200,000. An extra building 80 x 100 ft. in size, two stories high, will be occupied. The mill has 10,216 spindles and 5,000 more will be added, together with 31 more cards and 24 combers. The product of the mill will be largely changed from carded to combed yarns and will consist principally of 24s to 30s.

*Charlotte, N. C. The Scandanavia Belting Co., manufacturers of belting and brake lining, Paterson, N. J., which plans to establish a new plant here, has purchased more than three acres of land on the west side of North Tryon St., just within the city limits, on which the mill will be erected. Revenue stamps on the deed of transfer indicate a price of approximately $12,000 for the real estate. Lockwood, Greene & Co., Boston and New York, are preparing plans for the new plant.

*Franklinville, N. C. The addition to Randolph Mills, being erected to house bleaching and dyeing equipment, is nearly completed and machinery will be installed soon. The mill will bleach and dye cotton flannels up to 50 inches wide from its own looms. Equipment purchased includes water filter from Hungerford & Terry, Inc., Clayton, N. J., dry cans, calenders and tenter frame, etc., from H. W. Butterworth & Sons Co., Philadelphia, Pa. Randolph Mills expects to get production from its bleaching and dyeing plant about Jan. 1.

*Landis, N. C. The Corriher Mills Co. is now installing machinery in the recently completed additions. The new buildings will house 11,000 additional spindles and complementary equipment. George C. Bell, Charlotte, N. C., is the engineer in charge.

Spray, N. C. The Nantucket Mills have installed 14 additional silk looms, making a total of 24 looms in the silk department, 20 of which are the latest models built by the Crompton & Knowles Loom Works, Worcester, Mass.

*Fort Worth, Tex. The Fort Worth Cotton Mills will begin construction of their plant within 60 days, according to a recent report which states that eastern capitalists have underwritten the unsold stock of the company, making possible early building of the mill. These interests have agreed to immediately bond for $100,000 to be deposited in a local bank. The capital stock of the Fort Worth Cotton Mills has been raised from $1,000,000 to $1,500,000. New machinery, to include finishing equipment, will be installed. Officers of the company are as follows: J. R. Griffin, president; Dr. W. C. Duringer, vice president; W. H. Slay, treasurer, and B. M. McHarg, secretary. Directors include the above and R. C. Sweeney, C. L. Moody, Dallas, and J. C. Spears, Venus, Tex.

*Victoria, Tex. The Victoria Cotton Mills, recently formed by P. M. Keller of the Belton (Tex.) Yarn Mills, and associates, will ask bids late in November for construction of their mill, to be a one and two-story brick and reinforced concrete structure.

*Montmorency Falls, Que., Canada. The five-story, 260 x 105 ft. extension to the plant of the Dominion Textile Co., Ltd. is now about completed. It is intended to provide for a rearrangement of existing machinery and extension of present lines manufactured at Montmorency Falls.

Fact and Gossip

Forsyth, Ga. O. P. and W. R. Ensign, owners of the Ensign Cotton Mills here, have just purchased the Hampton Cotton Mills, of Hampton, Ga. The purchase includes a cotton mill, a knitting mill, a bleachery and an ice plant, and doubles the capacity of the present Ensign plant.

Macon, Ga. The Bibb Mfg. Co. has purchased the old Small warehouse and several other pieces of property adjacent to its Mill No. 1, for $23,000.

*Louisville, Ky. The product of the Louisville Textile Co. will be sold exclusively through Howard P. Kreutzer, 71 Worth St., New York, and not through T. M. Richards Co., Inc., as reported in error last week.

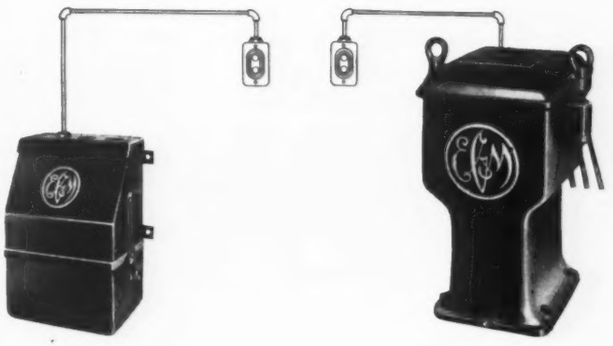
New Bedford, Mass. Demand for Wamsutta Mills' sheets and pillow cases has had such a phenomenal increase recently that all past records for production have been surpassed, and the facilities for this class of goods have been taxed to their utmost. Two floors of the sheeting mill are now operating on a day and night schedule and the whole department will soon be working a double shift.

Ware, Mass. As a result of the recent strike of weavers in the cloth department of the Otis Co., an agreement has been reached between the officials and employes that a grievance committee of employes for each department should be organized and that no walkouts will be staged until the matter in dispute is threshed out.

Whitinsville, Mass. Whitin Bros., Inc., have announced a reduction of wages to employes of the Linwood Mill, effective on Oct. 26. The amount

* Indicates previous mention of project.

START YOUR MOTORS
— THE MODERN WAY —
WITH A PUSH BUTTON



Type ZO Starting Switch, Oil-immersed
Maximum Ratings —
5 HP, 110 Volts
10 HP, 220, 440 and 550 Volts
Bulletin 1048

Automatic Compensator, Oil-immersed
Maximum Ratings —
75 HP, 110 Volts 250 HP, 440-550 Volts
150 HP, 220 Volts 500 HP, 2300 Volts
Bulletin 1042-*E*

Push-Button Control makes it possible for any one to start and stop your motors with perfect safety and without subjecting the driven machines to undue strains. The motors will be properly started and accelerated without danger of overloading the motors or drawing excessive currents from the line.

Remote Control permits locating the starting push-buttons where they will be within convenient reach. The Starter may be mounted close to the motor, on the wall, up in the roof trusses or wherever you wish.

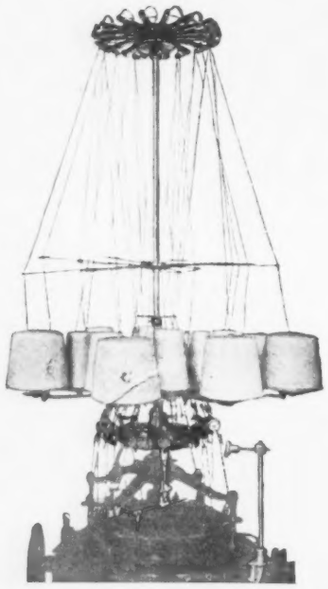
Push-Button Control is as necessary in a modern textile mill as a self-starter on an automobile.

Type ZO Starting Switches are for Across-the-line starting. They provide overload, no-voltage and phase failure protection. They are Oil-immersed.

EC&M Automatic Compensators provide gradual starting, automatic transition from starting to running position, and overload, no-voltage and phase failure protection. They are Oil-immersed.

THE ELECTRIC CONTROLLER & MFG. CO.
CLEVELAND, OHIO
BIRMINGHAM-BROWN-MARX BLDG.
CHICAGO-CONWAY BLDG.
CINCINNATI-FIFTH NATIONAL BANK BLDG.
DETROIT-DIME BANK BLDG.
NEW YORK-50 CHURCH ST.
LOS ANGELES-THOMAS MACHINERY CO.
AMERICAN BANK BLDG.
PHILADELPHIA-WITHERSPOON BLDG.
PITTSBURGH-OLIVER BLDG.
SAN FRANCISCO-CALL BUILDING
SEATTLE-570 COLMAN BLDG.
TORONTO-TRADERS BANK BLDG.

Crawford



E. O. B. Type
Stop Motion

CRAWFORD STOP MOTION

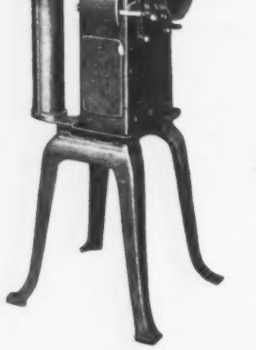
Why it's a boon to rayon and light silk knitters

The Crawford E. O. B. Type Stop Motion has it's greatest popularity among knitters of rayon and light silk. This advanced type does more. It performs all the functions of the regular stop motion — prevents knots, slubs and other imperfections from reaching the needles. More than that, however, it stops the machine when the thread breaks out at the carrier. This is a vital advantage to knitters of light yarns. It largely prevents run downs and quarters-off.

Crawford Stop Motions offer a sure way to diminished waste totals. Further details gladly upon request.

THE CRAWFORD MFG. CO.
NEW BRUNSWICK, N. J.

BRINTON KNITTERS



The *convenience* of this style "C" Brinton Hosiery Knitter is second in importance only to the high grade stockings it produces.

All parts are accessible from the front or top of the machine. Action of needles and yarn changer easily visible from front of machine. Screw adjustments throughout. Simple and easy transfer. Direct and accessible pattern connections.

Fast speed in both circular and reciprocating motion. Driving mechanism removable from frame as a unit. Revolving can for string work. Run off each stocking if desired.

Foreign Agents

Great Britain and the Continent
Wildt & Co., Ltd., Leicester, England.

South America
Santiago Scotto, Galeria Guemes, Buenos Ayres, Argentine Republic.

Australia
I. H. Butler & Co., Sydney — Melbourne.

China and Japan
Elbrook, Inc., 51 Kiangse Road, Shanghai, China.

H. BRINTON COMPANY, Phila., Pa.

Mill News—Continued

was not stated in the posted notices. Last December the mill made a 2½% cut.

RANLO, N. C. The employes of the Ranlo Mfg. Co., when given their checks last week, had 20% added, as a gift from the management. W. T. Love, treasurer of the Ranlo Mfg. Co., seemed anxious to assist the employes during the beginning of the winter, when there are extra expenses.

PHILADELPHIA, PA. The business conducted under the name, A. D. Irwin & Bro., Turner and Mascher Sts., manufacturing cotton men's wear and dress goods, has been discontinued and the firm is out of business.

GREENVILE, S. C. Only one bid was received when the Mojoto Mills were offered for sale recently. David Kohn, president of the company being the only bidder. The sale has not been confirmed by the court.

WOOL

New Construction and Additions

*CLINTON, MASS. Bids closed on Oct. 31 for the contract for the erection of an additional weave shed for the Roubaix Mills, Inc., adjoining their present weave shed at 792 Main St. It will be of brick construction, with steel frame, one story high, 100 x 203.5 feet. Plans are from the office of Parker, Bateman & Chase of this town.

WORCESTER, MASS. The Barbara Woolen Co. has installed a new set of cards and is making various improvements in its plant.

*ST. MARYS, OHIO. The St. Marys Woolen Mfg. Co. has awarded a general contract to Fred Verholt, St. Marys, for a three-story and basement, brick addition, to be used primarily for warehouse service.

PHILADELPHIA, PA. Gem Textile Mfg. Co., manufacturers of men's wear and dress goods, formerly located at Columbia Ave., Mascher and Turner Sts., has moved to Howard and Berks Sts., and installed additional machinery, making their total 80 looms.

PHILADELPHIA, PA. Prudential Worsted Co., Orthodox & Large Sts., manufacturers of worsted and woolen fabrics, has sold several of their looms, giving them space to install dyeing and finishing machinery which they contemplate doing in the near future.

HARRISVILLE, R. I. The Stillwater Worsted Co. has awarded contract to the Central Engineering & Construction Co., for the erection of a one-story frame addition, 24 x 236 ft. The new structure will cost $35,000. Lockwood, Greene & Co., Boston, are the architects.

SWEETWATER, TENN. According to a report, the Sweetwater Woolen Mills are making various additions to their plant, including the construction of a two-story brick building, 168 x 37 ft.

Fact and Gossip

COS COB, CONN. The Dent Woolen Co., which recently started operations here, is quite busy now on top-coatings and ladies' wear, and additional help is being taken on daily. A house warming was held recently in the No. 1 boarding house of the company, which has been completely refitted at considerable expense.

WEBSTER, MASS. The Packard Mills, Inc., reduced wages of all employes 10% effective Oct. 26. The plant employs day and night shifts.

PASSAIC, N. J. The Passaic Worsted Spinning Co. has resumed production at its mill, following the return of employes, who went out in protest of a wage reduction. The company declared a cut of 10% and has effected a compromise at 7½%.

*AUBURN, N. Y. The strike of weavers of the Auburn Woolen Co. is settled. The employes out of work for several weeks, will return at a 10% wage reduction with the understanding that if business increases and warrants it, the old scale will be restored.

KNIT

New Construction and Additions

HUNTSVILLE, ALA. R. C. Aycock, of South Pittsburg, Tenn., head of the Aycock Hosiery mills, made an official visit to mill No. 3 in this city last week and was pleased with the report that the mill is now turning out 300 doz. pairs of hose daily. He declared that he is making arrangements for the installation of machinery which will increase the output to 700 doz. pairs daily by next spring.

*BLACKWOOD, N. J. The mill of the Blackwood Silk Hosiery Co., construction contract for which was recently awarded to William F. Lotz, Philadelphia, will be a one-story and basement brick and steel building, 50 x 240 ft., to cost about $50,000.

*GLOVERSVILLE, N. Y. The Tryon Silk Fabrics, Inc. have completed removal of their plant to Morgantown, W. Va. The company has 10,000 sq. ft. of floor space in its new quarters.

*PHILADELPHIA, PA. Largman, Gray & Co., Frankford, are now installing the additional equipment recently ordered. It consists of 68 full-fashioned knitting machines, six loopers and six seamers.

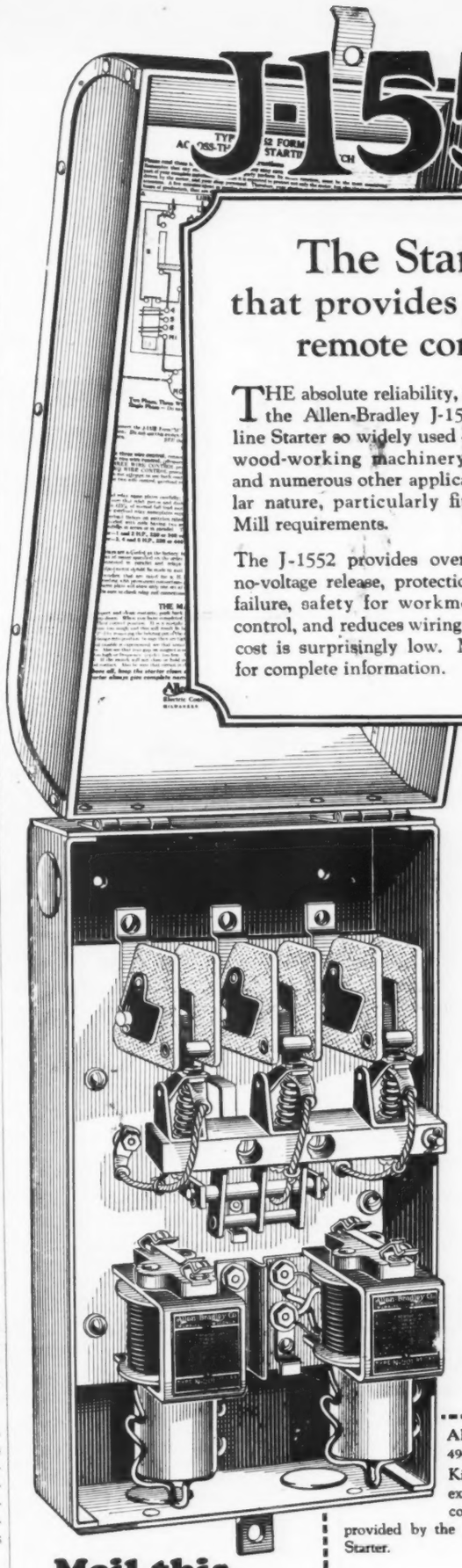
MIDDLETOWN, PA. Putnam Brandt, Middletown, has purchased property on Mill St., for the construction of a one-story knitting mill for hosiery production. Ground will soon be broken.

READING, PA. The E. Richard Meinig Co. is erecting a four-story brick addition to its plant at McKnight and Oley Sts., to cost $20,000. It will be of brick 46½ x 81 ft.

*SINKING SPRINGS, PA. The H. W. Anthony Co., Strausstown, Pa., has awarded a contract to the Sharp Construction Co., Reading, Pa., for its proposed mill on Commerce St., to be one-story, 100 x 150 ft., and cost about $50,000. W. E. S. Dyer, Philadelphia, is architect and engineer.

*SPARTANBURG, S. C. The Powell Knitting Co., of Philadelphia, is installing 200 120-needle knitting machines in the Model Mill, purchased some time

* Indicates previous mention of project.



60% GREATER PRODUCTION

than on Competitive
Single Feed Machines

The Standard Type H, Two Feed Machine produces fancy hose with a production at least 30% greater than the Standard H, Single Feed Machine.

Since the Single Feed, Standard H, has a production of 30% greater than competitive single feed machines—our Two Feed Machine, therefore, has a 60% greater production than others.

Write for our catalog, it clearly explains why this high production is obtained on Standard Machines.

STANDARD-TRUMP BROS.
MACHINE CO., *Wilmington, Del.*

THE illustration shows our No. 40 Shuttle Bobbin Winder, all ball bearings. The most interesting feature of this is each spindle is a complete unit and can be detached in a few minutes, leaving balance of machine working.

Can be arranged to wind from Spools, Bottle Bobbins or any kind of package, also equally successful from skeins to shuttle bobbins. Artificial Silk specially featured.

This machine is equipped with a spool attachment, that gives you an even tension through the bobbin. There is no sharp pluck caused by machine compensator to cause an underwind which breaks in the loom.

Between the spool bracket is a spacious sheet metal pan for the storage of empty spools, every part is within reach of the average operator, no long reaching or stooping to tie ends or change spools or bobbins.

When considering the Lever No. 40 think of the following:

The Life of Machine, Perfect Bobbins Production and the Operator.

OSWALD
LEVER
CO., INC.
PHILADELPHIA
STARTED IN 1880

Mill News—Continued

ago. J. H. Dupree will be superintendent of this plant.

SHERMAN, TEX. The Pool Knitting Mills will begin the manufacture of men's hose about the first of January in a building close to that of the Pool Mfg. Co., through which the product of the new knitting mill will be sold. Ten knitting machines, two ribbers, one looper and dyeing machinery will be installed at first. Carl Pool will take care of the buying.

*SHERBROOKE, QUE., CANADA. Julius Kayser & Co., Ltd., expect to have their four-story concrete addition ready for operation about the middle of this month. It will be equipped with about 60 full-fashioned hosiery machines.

Fact and Gossip

BROOKLYN, N. Y. Myown Knitting Mills, Inc., 568 De Kalb Ave., have filed notice of dissolution under state laws.

COHOES, N. Y. A prominent textile firm is said to be seeking a lease of the Granite Mill, formerly operated by the Wm. Moore Knitting Co., from the Cohoes Power & Light Co., which recently purchased it, and announcement of its disposal is expected at an early date.

*FULTONVILLE, N. Y. Henry Underwood has completed removal of his plant from Fonda to Fultonville where operations are being carried on day and night in leased quarters on York St.

*KINSTON, N. C. The Kinston Knitting Co., recently chartered with authorized capital of $400,000, will take over the Orion Knitting Mills, of Kinston. C. F. Harvey is president of the Kinston Knitting Co. and C. Oettinger, treasurer.

PHILADELPHIA, PA. Henry L. Kahn of the Aristo Hosiery Co., Inc., hosiery jobbers, New York, has purchased the Fox Chase Knitting Mills, 27 Jarrett Ave., full-fashioned hosiery manufacturers. Mr. Kahn states he will continue the use of the trade-mark, "Aristo," in selling the product of this mill, which has an equipment of 20 full-fashioned machines.

WOONSOCKET, R. I. The Narragansett Knitting Mills, Inc., recently chartered, have acquired title to the property of the Leicester Knitting Mills Co., 148 Bernon St., and will operate the plant, specializing in the manufacture of bathing suits and sports wear. Walter B. Wrigley, of Woonsocket, is president of the new company; W. Howard Wickes, Woonsocket, vice-president, Abraham Persky, Worcester Mass., treasurer, and Sidney Davis, New York, secretary. Mr. Wrigley will be general manager of the plant as formerly.

WOODSTOCK, ONT., CANADA. The Harvey Knitting Co., Ltd., has installed about $40,000 worth of new machinery during the last year. A portion of the plant is running overtime and Saturday afternoons.

SILK

New Construction and Additions

*DANBURY, CONN. Work on the addition to the Tweedy Silk Mills is proceeding rapidly and the contractors expect to have them completed by January 1st. The Torrington (Conn.) Building Co. is the contractor and Westcott & Mapes, Inc., of New Haven, Conn., the engineers.

WILLIMANTIC, CONN. The Rossie Velvet Co. is erecting a new building here, which when completed, will house all equipment now operating in the three separate buildings of the company in Willimantic. This does not mean an enlargement, simply the consolidation of the three separate Willimantic plants into one unit.

*HACKETTSTOWN, N. J. The Mohawk Silk Throwing Co., Inc., of which Bayard Lipps is president, Chester J. Squire, secretary and treasurer, and C. H. Reidy, vice-president, has purchased the Ashley mill at Hackettstown. The new corporation is capitalized at $10,000. Initial equipment of 7,500 spinning spindles is now being installed and it is planned to increase this 100% by June 1926. Orders for the machinery have already been placed.

DUNMORE, PA. Henry Mindlin & Sons, Inc., which took over the plants of the Pennsylvania Silk Throwing Co., formerly operated by Mindlin & Rosenman, at Dunmore and Scranton, Pa., some time ago, are installing additional machinery in the mills. H. Mindlin is president and treasurer of Henry Mindlin & Sons, Inc., which have a capital of $250,000. New York office is maintained at 171 Madison Ave.

Fact and Gossip

DOVER, DEL. The Wellsboro Silk Mfg. Co., Inc., has been incorporated under Delaware laws to manufacture yarns and silks, with authorized capital of $100,000. M. L. Rogers, L. A. Irwin and William G. Singer, Wilmington, Del., are the incorporators.

PATERSON, N. J. The K. T. Silk Mills, recently formed with a capital of $100,000, to operate a local mill, have appointed Peter Cohn, 140 Market St., as representative for the company. Simon Kuchin heads the organization.

PATERSON, N. J. The Abington Silk Throwing Co., with offices at 152 Market St., has been incorporated with authorized capital of $100,000 divided into 1,000 shares of $100 par value each. The incorporators are William Prestwood, Dunmore, Pa., George Day and Amy Day, Paterson.

PATERSON, N. J. Machinery of the Courtland Silk Co., 12-18 Courtland St., was sold at auction at a receiver's sale in chancery, Oct. 16, by order of August A. Fisher, receiver, to the Silk City Exchange, for $19,250.

PLYMOUTH, PA. Hess, Goldsmith & Co., Inc., will install a new humidifying system in their mills. The American Moistening Co., Boston, has the contract.

RAYON

New Construction and Additions

ST. CLAIR, MICH. The Chemical City Rayon Corp., recently formed to establish and operate a mill in this section, with capital of 200,000 shares of stock, no par value, will be represented by one of the incorporators, Lafayette D. Vorse, 1112 First National Bank Bldg., Detroit, Mich. The other incorporators are Rob-

*Indicates previous mention of project.

PERMANENT WHITENESS

TRADE OJACO MARK

MILL WHITE

Oliver Johnson & Co., Inc.

Makers of Paints for All Industrial Purposes

ESTABLISHED 1833

18-24 Custom House Street

Providence, R. I.

"Save the surface and you save all"

OJACO DISTRIBUTORS

Boston, Mass. Lewis E. Tracy Co.

Fall River, Mass. Wm. F. Harticon

Charlotte, N. C., Charlotte Supply Co.

Greenville, S. C., Frank R. Henry & Co.

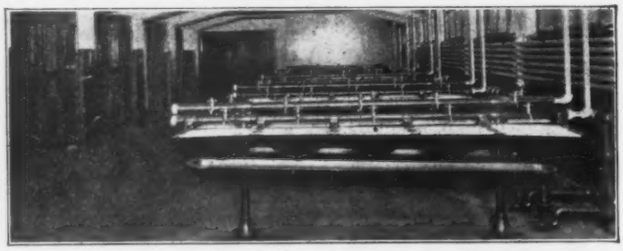
Woonsocket, R. I., Pinault & DeNevers

Columbia, S. C., Columbia Paint Co., Inc.

Syracuse, N.Y., Paragon Plaster Co.

Utica, N.Y., American Hard Wall Plaster Co.

Rochester, N.Y. F. P. Van Hoesen Co.



Typical Installation of MEECO Economy Type Washbowls

MEECO INDIVIDUAL WASHBOWLS
IN THE TEXTILE INDUSTRY

MEECO Individual Washbowls were the result of years of study of industrial sanitary conditions. That is why you will find them in 5000 plants and why they continue to be the first choice of a large proportion of leading concerns in many varied lines of industry.

A few of the MEECO Washbowl installations for the textile industry include the following:

AM. SILK SPINNING CO.
AMERICAN WOOLEN CO.
AMOSKEAG MFG. CO.
ANCHOR WEBBING CO.
APPLETON WOOLEN MILLS
CHENEY BROTHERS
CROMPTON & KNOWLES LOOM WORKS
DRAPER CORPORATION
ESMOND MILLS
LAMB KNITTING MACHINE CO.
LEADER WEAVING CO.
LOWELL BLEACHERY
LUDLOW MFG. ASSOCIATES
MISHAWAKA RUBBER & WOOLEN MFG. CO.
NEW BEDFORD COTTON MILLS (for Swanon, N. C.)
ROXBURY CARPET CO.
SACO-LOWELL SHOPS
SAXONY WORSTED MILLS
WM. SKINNER & SONS
S. SLATER & SONS
SUMMIT THREAD CO.
TALBOT MILLS
TEXTILE MFG. CO.
UNIVERSAL WINDING CO.
VAUGHN KNITTING CO.
WHITIN MACHINE WORKS, ETC.

MECCO Washbowls are adaptable to small or large space. They save more floor space than any other type of apparatus. Their construction offers greatest economy in conserving water. They are ruggedly built, simple in construction, easy to operate and trouble-proof. You can order these bowls in batteries of any number to fit your space. They are easily installed. And they are moderately priced.

It Will Pay You To Investigate. Write Today for Catalog and Prices.

Drinking Fountains
Shelving

METAL MEECO PRODUCTS

Chairs and Stools
Lockers

MANUFACTURING EQUIPMENT AND ENGINEERING CO.
FRAMINGHAM, MASS.

Rundle-Spence Vertico-Slant Sanitary Drinking Fountains may be had with body coolers if desired. They are designed for use in every kind of industrial plant.

DRINKING SANITATION
—*year in and year out*

Install Rundle-Spence Vertico-Slant Fountains and you will be providing drinking sanitation forever. They are made to satisfy thirst sanitarily—to invigorate your workmen to increased production—and to save "waste time and motion" on their part.

Notice the R-S nozzle—***lips can't touch it.*** The spreading of contamination through lip-contact is positively eliminated. The slight slant stream makes drinking easy, quick and convenient.

The R-S line includes Sanitary Drinking Fountains, Bath and Plumbing Fixtures and Supplies. Write for catalog with prices, specifications, and complete information.

RUNDLE-SPENCE MFG. CO.
67 Fourth Street, Milwaukee

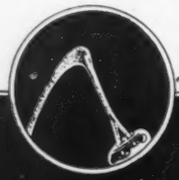
RUNDLE-SPENCE

No. 600 Wall Type

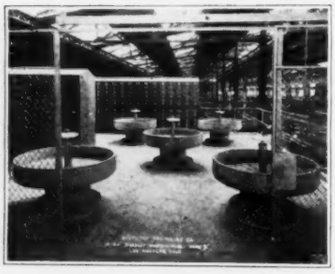
This Is No. 600

It's a wall-type fountain favored in industrial circles. And it's a Halsey Taylor, which means it's the most sanitary for the workers. Halsey Taylor Drinking Fountains come in varied types for every purpose. Each has automatic stream control and two-stream projector—health-promoting features found only in Halsey Taylor fountains. It costs no more to buy the best—Write!

The Halsey W. Taylor Co.,
Warren, O.



HALSEY TAYLOR
Automatic Stream Control
DRINKING FOUNTAINS



A Bradley Equipped Lavatory

Wash at the fountain in clear running water

The Bradley Washfountain

The modern lavatory equipment for collective washing. Just as the "Bubler" Fountain has replaced the old tin drinking cup so the modern "Washfountain" is replacing the old dirty washing troughs, sinks and bowls. Employees enjoy the "wash-up" in the clear running sprays of fresh water. Saves time—Saves space—saves water and lessens "upkeep" costs.

A few of the Textile plants now using Bradley Washfountains

Real Silk Hosiery Co.
No. American Lace Co.
Phoenix Hosiery Co.
Benton Hosiery Mills
National Dye Works
Milwaukee Worsted Co.
American Textile Woolen Co.
Saxony Knitting Co.
Holeproof Hosiery Co.
Daniel Boone Woolen Mills
Louisville Textile Co.
Lorraine Manfg. Co.
Wm. Brown & Co.
Appleton Woolen Mills
Dexdale Hosiery Co.
Ironall Overall Factories and others.

Two sizes, 54-inch and 32-inch diameter for ten or six people

Write for Catalog

BRADLEY WASHFOUNTAIN CO., Milwaukee, Wis.

Eastern Representatives { W. H. SILPATH, 2401 Chestnut St., Philadelphia. A. C. COOPER, 280 Madison Ave., New York. ARTHUR S. HALL CO., 3 Berkmans St., Worcester, Mass.

ert McB. Grindley, Pontiac, Mich., and W. L. Jenks, Port Huron, Mich.

*ELMIRA, N. Y. The International Rayon Corp. has closed its option on the McCann property in Elmira Heights. Plans for the new plant are now being prepared and construction is expected to start within a few weeks.

*PARKERSBURG, W. VA. The Viscose Co., Marcus Hook, Pa., which recently purchased 125 acres of land here will soon take bids for the new branch mill. The Baltimore & Ohio Railroad Co. is arranging to extend a siding to the site at once.

DYE, BLEACH AND FINISH

New Construction and Additions

CONCORD, N. C. The Kerr Bleaching & Finishing Works, Inc. have awarded contract for the erection of an addition to their office building.

Fact and Gossip

HOPE VALLEY, R. I. A liquidation sale of the plant, equipment and property of the Bowditch Dye Works, Inc. will be held Monday, Nov. 9 beginning at 10:30 A. M., at the mill, formerly the Nichols & Langworthy Machine Shop. G. L. & H. J. Gross, Providence, R. I., are the auctioneers in charge.

WOONSOCKET, R. I. It is reported that the Quality Piece Dye Works are erecting an addition to their plant.

MISCELLANEOUS

New Construction and Additions

DETROIT, MICH. The Detroit Bedding Co. has plans under way for a new two-story mill, for which it is expected to ask bids at an early date. I. M. Lewis, Detroit, is architect.

WATERVLIET, N. Y. The Slade Products, Inc., of New York, has leased the Barker Building here for the manufacture of brake linings and automobile fabrics. Machinery is now being installed and operations will be under way by Dec. 1.

AKRON, OHIO. The Akron Mattress Mfg. Co., Miami St., has plans in progress for a new brick and steel addition, estimated to cost $50,000. L. A. Gleitzman, 701 Fernwood Drive, is architect.

Fact and Gossip

BAYONNE, N. J. The Safety Insulated Wire & Cable Co. has filed notice of change of name to the Safety Cable Co. The company recently merged with the Phillips Wire Co., Pawtucket, R. I.

UTICA, N. Y. The Industrial Advancement Corp. has been incorporated here with $1,000,000 capital to seek and finance the establishment of worthy textile firms in this city. The new corporation is composed of prominent business men and manufacturers.

LUBBOCK, TEXAS. The Texas Technological College has been allowed a deficiency warrant of $68,000 by the governor of Texas to provide extra equipment and employ additional teachers the first year. The college expected a maximum of 750 students, but opened with 1,000, making a deficiency appropriation necessary.

* Indicates previous mention of project.

Variations in Yarn Structure

(*Continued from page 87*)

difference in the yarn produced, in favor of that made from cone roving. He therefore changed over the whole set, to get still better results.

These modifications in the machines used, producing slightly varying mechanical structures in the yarns made, are sometimes responsible for the introduction of new textures. We have a few instances in mind. A yarn manufacturer found that, after introducing cone drawing in place of open, and giving his cloth finisher a free hand, the resultant cloth was almost like velour, compared with that previously made. The difference was in yarn structure, the fibres after cone drawing not so compact and strained.

Are those in the trade alert to all the possibilities in yarn structure? Many of them deserve credit for experimental work, having worked and received no apparent reward. There are some who have been well repaid for time, thought and expense in making new yarns, by regarding detail in drawing and spinning. When we examine a list of fabrics made from wool and worsted yarns, we quickly realize that not all of them are the product of the designer. Many of them owe their introduction to the spinner, being the direct result of yarn formation.

Business News

Permutit Co. Vindicated

The Federal Trade Commission has discussed the complaint against the Permutit Co., New York City, manufacturers of water softeners, etc. This complaint was filed by the Commission Sept. 15, 1924, and was for alleged unfair trade practice.

The Commission made an exhaustive investigation of the company's business practice. Nearly 100 witnesses were examined, over 80 of whom were produced by the Commission in support of its complaint. Among these witnesses were salesmen, officers and attorneys of a number of competitive concerns.

The unqualified dismissal of the Commission's complaint, after full investigation, is a vindication of the company and a refutation of the charge that it was guilty of unfair trade practices.

Opens Cleveland Sales Office

The Chicago Bridge and Iron Works have opened a Cleveland sales office in room 963, Union Trust Building under the direction of George S. Sangdahl, district sales manager. Mr. Sangdahl comes to Cleveland from a similar position in Montreal with the Horton Steel Works, Limited, a subsidiary of the Chicago Bridge and Iron Works. Associated with Mr. Sangdahl will be A. W. Warren, at the present time in the Chicago office of the company. Other sales offices for Canada and the United States are maintained in Chicago, New York, Atlanta, Dallas, San Francisco, Seattle, Winnipeg, Montreal and Toronto.

PECCO INC. ST. LOUIS

Pecco Systems Meet Mill Requirements.

PECCO Heating and Ventilating Systems are particularly adapted for steam and vapor removal in textile mills, thus eliminating the heavy, rank and obnoxious air, keeping it fresh and clean.

PECCO Systems are compact units. They heat, ventilate, dry and can be adapted to practically any type of air conditioning service.

PECCO Systems are built in various styles and sizes, to meet every requirement.

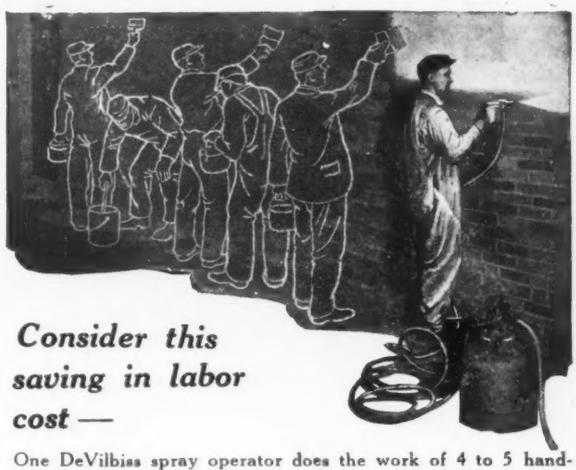
Deferred Payment Plan.

We have just completed a deferred payment plan which will greatly increase sales possibilities.
Write today for full details.

Pecco Incorporated

2933 North Market Street, Saint Louis, Mo.

5 Painters' Work—1 Man Cost



Consider this saving in labor cost —

One DeVilbiss spray operator does the work of 4 to 5 hand-brushers. This is the average economy you are able to effect in painting your mill interior, its outside walls and the village homes with the DeVilbiss Spray-painting System.

Additional advantages painting the DeVilbiss way are: a more thorough and uniform coating; a coating with the hiding power of two brushed coats; less scaffolding; no spattering and dripping of paint; less interference with mill operation.

Let us tell you more about this modern, low cost method of painting. Address —

THE DeVILBISS MFG. CO. 236 Phillips Ave. TOLEDO, OHIO

DeVilbiss
Spray-painting System

"Buffalo" pump feeds largest boiler

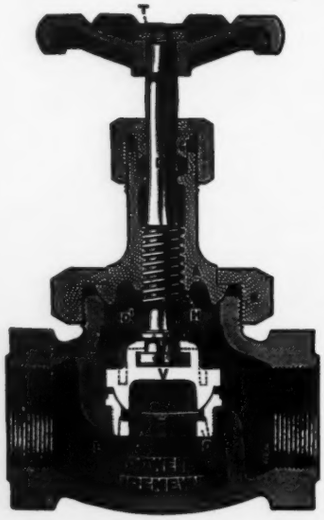
When you buy boiler feed pumps, why not use those which are favored by large concerns?

The illustration below shows a Buffalo 3 stage, class "RDS" pump installed at the Cecil station, Pittsburgh, of the Allegheny County Steam Heating Co. This pump is feeding what is said to be the largest boiler in the world.

Many other large power producers find Buffalo pumps reliable, efficient and economical.

Buffalo Steam Pump Co.,
154 Mortimer St., Buffalo, N. Y.

Powell Valves "IRENEW"



ALL PARTS RENEWABLE

Acid-proof disc and seat ring of non-corrosive white

"POWELLIUM"

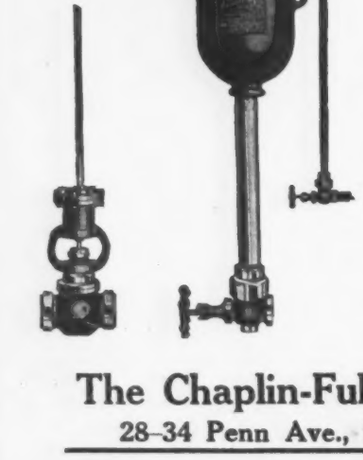
Nickel
Iron body brass mounted or all iron.

Avoid disappointment in valve service by specifying

POWELL "IRENEW" VALVES

THE WM. POWELL CO.
Dependable Engineering Specialties
CINCINNATI, O.

Economy + !



The Vigilant Feed Water Regulator saves 15 to 17% on coal expense—this despite the fact that it is primarily a safety device. Here is a real fuel economy—tons galore added to the credit side of the ledger—together with positive protection against boiler explosion from low water.

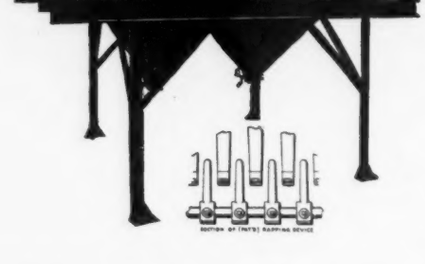
And that isn't all—the even, steady feeding the Vigilant provides lengthens the life of any boiler—repairs are lessened. Boiler efficiency scores—cylinder lubrication is better.

There are more reasons why you should have the Vigilant in your mill. They're in the catalog. May we send it?

The Chaplin-Fulton Mfg. Co.
28-34 Penn Ave., Pittsburgh, Pa.

"Not a Single Failure"

DUST COLLECTION CONVERTS "LOSS INTO PROFIT"



MAKERS OF "CLOTH SCREEN" COLLECTORS FOR ANY INDUSTRY

J. W. PAXSON CO., Philada, Pa.

KNIT GOODS MARKETS

Raw Cotton and Raw Silk Problems

Uncertainties in Both are Influencing Hosiery Jobbers—Expect Quiet Until Jan. 1

Shrewd observers do not look for anything except routine activity in hosiery, with the exception of full fashioned goods, until Jan. 15 or Feb. 1. They feel that jobbers have bought all the spring goods (with the same exception) they intend to for the time being, and that the wholesale trade can well afford to sit back and watch developments in the raw cotton and raw silk markets.

Catchy Patterns Wanted

Catchy patterns in novelty half hose, of course, should be bought fairly freely right along, but some selling agents believe that even on this class of merchandise jobbers will be content until the end of the year with what they have on order.

Cotton and its fluctuations do not exercise anything like the influence of three or four years ago. Nevertheless the big drop in the staple on the large crop prospect cannot fail to instill a conservative attitude on goods in which it plays only a minor part.

There is considerable readjustment of yarn prices to come if raw material prices hold at approximately present levels. The strong position of southern spinners may delay this readjustment until after the turn of the year—by some it is believed there will be no appreciable decline in combed and mercerized quotations until then—but the yarn market cannot go much beyond the first of the year without reflecting the cotton decline.

A Sensitive Position

Cotton hosiery is spoken of as easier in sections, but representative commission houses doing a large volume in cheap goods have not reduced their prices. No general movement toward higher prices on silk and rayon mixtures has occurred. Scattered advances are reported, but along with these are heard rumors that quotations on a line or two which have not been marked up are not being firmly held.

The market as a whole may be regarded as in a sensitive position where prices on everything but full fashioned goods may move in either direction with very little urging. It is difficult to see how silk goods and silk and rayon mixtures can fail to be marked up all along the line unless silk breaks sharply, and it is not easy to believe that lower prices on cotton goods are improbable when yarns reflect the drop in cotton.

Hosiery Notes

It is estimated that the production of full fashioned goods will be increased approximately 4,000,000 dozens in 1926.

* * *

A well known selling agent says he will shortly offer an 8 strand, 260-needle stocking, all-silk boot, mercerized top, heel and toe, mock seam and all the trimmings, which his mill claims can be sold at less than $6.50.

* * *

Wool goods openings for 1926 are scheduled for late this month or early December. Duplicates are described as satisfactory in most sections of the New York market, the recent cold snap having been responsible for a decided spurt. Fancy half hose will feature all of the important lines, notwithstanding misgivings in some quarters as to their ability to last through next fall.

* * *

A selling agent of long experience speaking: "There is no use kidding ourselves any longer with the idea that we can get the major portion of our wool goods business in December. We have kept hanging on to this beautiful theory long after it has failed to work out in practise. I do not expect to get any really big volume on my line until after Jan. 1."

* * *

Notwithstanding a variety of reports on women's all-rayon goods there can be no question about the well sold position of established lines in this field. One of those which has made rapid strides during the last two years is comfortably sold for the first half of 1926, and deliveries before March would not be the easiest thing in the world to obtain from this source.

* * *

Everyone does not agree with the proposition, frequently stated in recent months, that pineapples are all through, in women's goods. A leading commission house on this type of merchandise reports heavy business for quick shipment during the last few weeks, which has practically sold up a large production to the end of the year.

BURLINGTON, N. C. The National Hosiery Mills, Inc., of this city, have been chartered to manufacture hosiery and knit goods of all kinds. Authorized capital stock is $50,000 and $1,500 has been subscribed by Ralph Kerr Lasley, Walter L. Anderson, and Edwin W. Lasley, all of Burlington.

BROADALBIN, N. Y. The Broadalbin Knitting Co., Ltd., is now operating its spinning departments on a 24-hour daily schedule.

"New Use for Balbriggan"

The following interesting comment on balbriggans is reprinted from the latest issue of the General Letter of the Associated Knit Underwear Manufacturers of America:

"Two years ago your advertising department had balbriggan fabric cut and made into dresses. These were shown to fashion editors, who approved them. You know the rapid strides since made in the use of this fabric for sport dresses.

"It has lately been found that balbriggan is adapted to men's sport shirts, to take the place of flannel, which has long been used for this purpose. Suitable samples have been placed in the hands of shirt manufacturers who are making up shirts to test for sales responsiveness.

"Tests are also being made of balbriggan for women's negligees. It is especially adapted to Pullman robes, being soft, warm, and easy to pack. New fabric effects are being obtained by combining cotton and rayon, or worsted and rayon.

"Another division of experimental work in the style-merchandising department is the test of balbriggan for women's underwear, especially in bloomers and vests. Attractive color effects are being worked out, that in the judgment of those who have seen samples, will have very decided style appeal to women.

"Knit underwear manufacturers interested in this project should get in touch with Merchandising-Advertising Division of The Knit Underwear Industry, 395 Broadway, New York."

Spring Outerwear Shades

The Color Card Committee of the National Knitted Outerwear Association, in consultation with the Textile Color Card Association of America, has selected and recommends the following colors as those most likely to be popular in the spring of 1926:

Versailles—Pale China Blue.
LaValliere—Dusty Lavender.
Marie Antoinette—Dull Rose Pink.
Mediterranean—Deep Turquoise.
Ponce de Leon—Sunny Gold.
Candy Pink—Deep Candy Pink.
Oakbuff—Light Buff.
Blue-Lavender—Bluish Lavender.
Crystal Grey—Pale Rose-tinted grey.
Phantom Red—Bright Yellowish Red.
Cinnamon Pink—Bois de Rose shade.
Queen Blue—New Poudre Blue.
Yellow Daisy—Maize Yellow.
Absinthe—Yellowish Green.

A color card showing each of the above shades dyed in wool yarn is in preparation.

Fall Underwear for Next Year Offered

A Few Southern Mills Taking Business for January-February-March on Memorandum

Large southern producers of men's ribbed underwear are offering merchandise for delivery during January-February-March, according to reliable reports in the New York market this week. It is understood that these goods are being offered on memorandum to those jobbers, particularly in the Northwest, who must have deliveries during the first three months of the year.

Business is being taken, it is declared, on an open price basis, the understanding being that prices will not be higher than those quoted for a similar delivery period this year. By this method, of course, the jobber has nothing at all to lose, and his gain rests in the assurance of getting merchandise when he wants it.

The above procedure has been definitely identified with two of the largest producers in the South; it is known that at least one large manufacturer in that section of the country is not a party to it.

As to the date of the formal opening of prices for 1926, it remains general market understanding that the mills which always lead the field in this matter will probably take no action before Dec. 1. It is assumed in the selling market that these mills will consider it inadvisable to delay quotations much beyond that date.

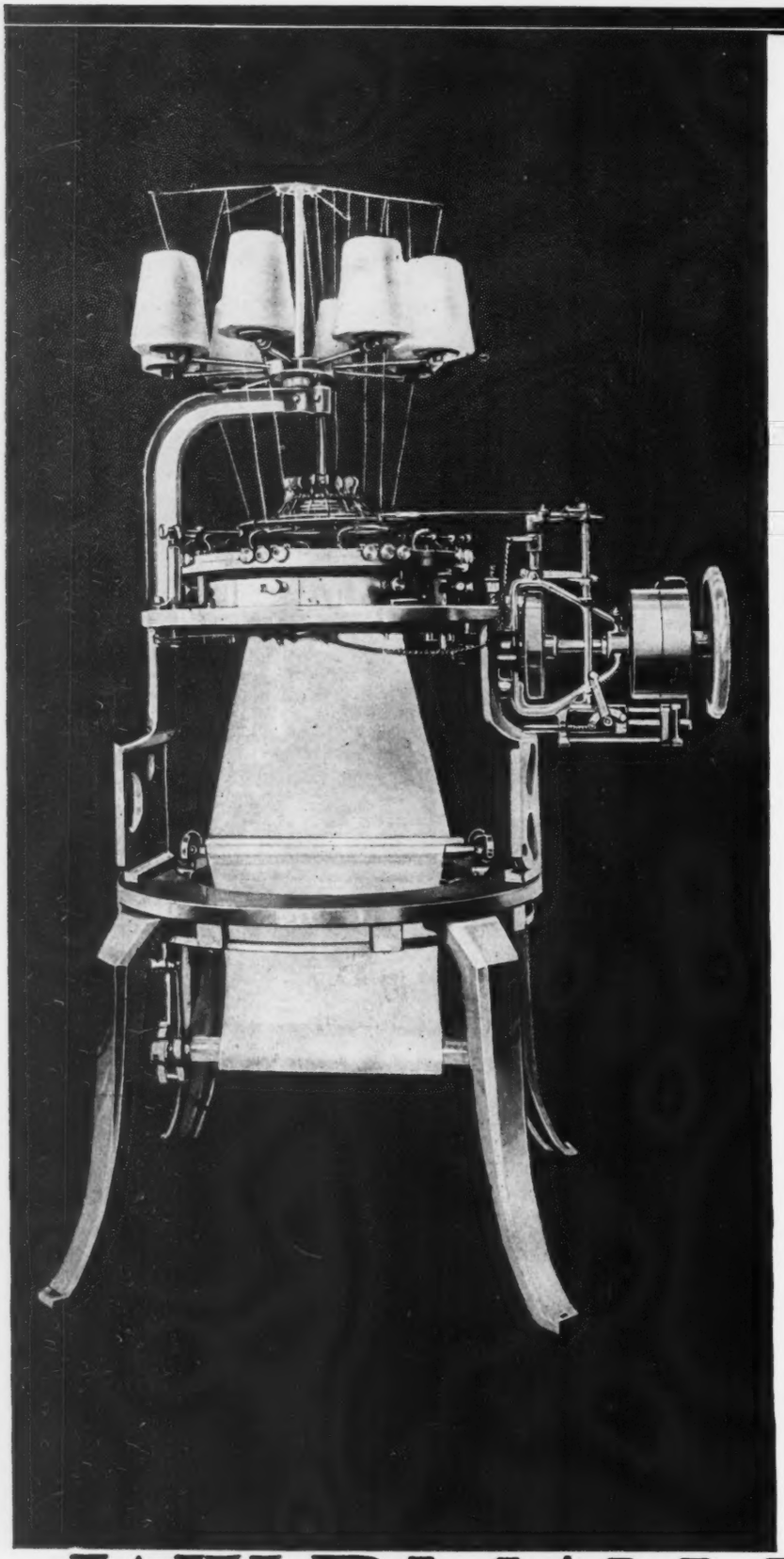
Jobbers Have No Stocks

The factor that has made a late opening seem particularly advisable this year—the necessity for allowing jobbers to get rid of all this year's goods they have bought in view of lower prices expected for 1926—seems to have been somewhat exaggerated.

According to mill representatives in close touch with the jobbing situation, jobbers have for months been buying only what they absolutely needed. It is a fairly safe bet that practically all of the goods which jobbers have bought during the last two months have been as good as sold to retailers before their sale to jobbers. It is extremely likely that at the end of November jobbers' stocks of heavy-weights will consist of broken assortments only.

Underwear Notes

Before the cotton market gives better evidence of having reached the end of the decline and until the yarn price situation is cleared up it is idle



Made to Meet Your Requirements

The Wildman Spring Needle Body Machine has been developed to meet the exacting requirements of the trade. In the hardened steel needle cylinder on the Wildman, the cuts are accurate to 1/1000 of an inch — a guarantee of faultless fabric.

Changes of stitch are controlled by graduated micrometer adjusting screws which *stay* set. The new style ball-bearing take-up keeps the cloth under absolutely uniform tension.

Even yarn breakage is eliminated as far as is mechanically possible by the addition of the Wildman Furnishing Wheel Unit—supplied only with this machine. Illustrated instruction book furnished without charge.

We have issued a new edition of the complete and informative book, "The Science of Knitting." Price $2.00.

WILDMAN MFG. CO.

NORRISTOWN, PA.

Knit Goods Markets—Continued

to talk of the extent of the reduction on 1926 heavy-weights. Selling agents who two weeks ago believed the decline would not amount to more than 25c. on union suits have altered their ideas, however, to the extent of predicting reductions not in excess of 50c. on suits and 25c. on shirts and drawers.

* * *

It is market gossip that the head of one of the pace-setting mills in the South had not bought any cotton to speak of prior to the Government report of last week.

* * *

Yarn men tell of tests being conducted by buyers through offers to purchase at from 1c. to 1½c. below spinners' quotations. These attempts have had no influence at all on spinners, according to yarn brokers. Better makes of yarn are sold up tight to the end of the year at least.

* * *

Various interpretations are placed on the recently announced new line of men's ribbed union suits to be made by a New York State organization which has never before turned out goods of this character. Those who are good at reading signs say that in the final analysis this is yet another indication of the trend away from women's cotton underwear.

* * *

Conservatives still talk of women's rayon underwear with many ifs, ands and buts. One of the pioneer mills in this comparatively new branch of manufacture, making goods for jobbers only, which has gone through several stages in its development, reports steady but not excited growth in its rayon business. This mill has concentrated on better-class goods, refusing to enter into the severe competition on cheap merchandise. It declares that jobbers who have put the rayon line in and given it a real chance have come back steadily for duplicates. The number of machines on rayon fabric is growing slowly but steadily, about 50 now being employed on these goods exclusively.

Cooperative Insurance Adopted

Life insurance protection for more than 1,000 employes of the Standard Knitting Company, of Knoxville, Tenn., has been adopted under the group plan of the Metropolitan Life Insurance Company. The insurance exceeds $1,000,000 and provides coverage for individuals ranging from $1,000 to $3,000. The plan is cooperative as premiums will be paid jointly by the employer and employes.

Navy Wants Wool Socks

Bids will be opened Dec. 8 by the Bureau of Supplies & Accounts, Washington, D. C., on 56,100 pairs of woolen socks.

Staple Sweaters for 1926 Average Lower

On One Line Prices are Off $1.50 to $3.00Sentiment Develops Later Opening

Reliable information on staple sweater prices for 1926 is difficult to obtain, for publication, as is always the case for a short time after the openings. Practically all lines were open at the middle of the week, but sellers were keeping prices as much under cover as possible. Everyone, as usual, wants to get a complete line on competitors' prices before making known his own.

From the few reliable reports obtainable it is evident that quotations will average at least slightly lower than those named a year ago. In some instances merchandise is being offered at unchanged prices, this being particularly the case of well established lines of shakers.

Although exact figures are not yet obtainable as this is written, it is known that the prices of a large-production mill on shakers, jumbos, etc. have been reduced from $1.50 to $3.00 all through the line. One line of shakers on which business has been excellent this year is maintained unchanged at $51. A reduction of $3 is reported on one line of cotton-back goods, which is explained with the statement that a larger percentage of cotton is being used for next year than was used this year.

Openings Too Early?

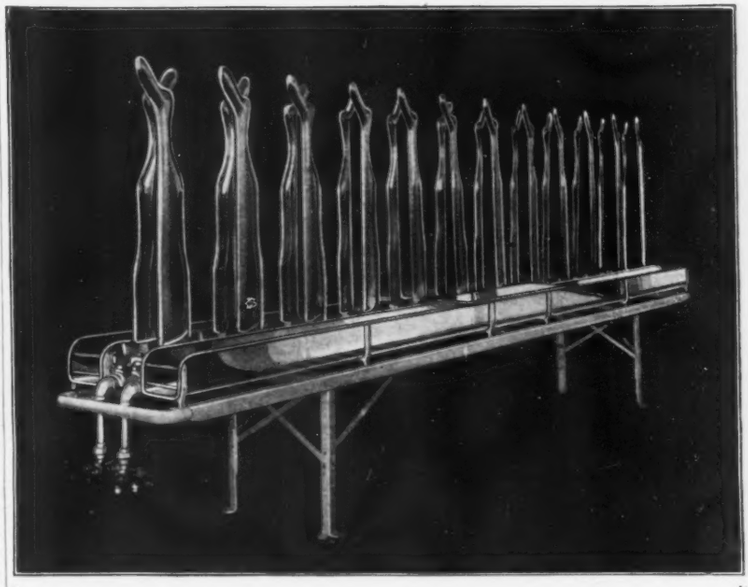
Intelligent comment is hardly possible as yet on the reception being met by the new lines. In sections it is declared that fair business is going to road men, some of whom have been out ten days to two weeks. In others, however, it is declared all indications point to light buying until after Jan. 1.

Capable selling agents are convinced that it is a mistake to open staple sweaters for the following year early in November. The days are past, they say, when jobbers can be expected to place sizable business in November and December, and the sooner mills recognize this fact the better it will be for them.

A progressive commission house man believes that the time to open staples these days is early in January. According to his idea, an opening as late as this would reduce the possibilities of price unsettledness to a minimum, would enable mills to keep busy during November and December on spot goods, and would not result in any loss of volume for the new season.

COHOES, N. Y. The Atlantic Mill of the Roff Knitting Mills, Inc., has curtailed night operations in some departments but is maintaining capacity day schedules.

COHOES, N. Y. The Himes Underwear Co. which recently sold its plant to the Little Falls Fibre Co., filed articles of dissolution with the secretary of state last week.



Paramount Progress

The increasing number of Paramount Users establishes more firmly than ever before, the Superiority and Efficiency of the PARAMOUNT METHOD for correct hosiery drying and finishing. One of the important factors in determining Paramount Supremacy is the constant improvement of Paramount Equipment to more effectively fill the requirements of discriminating hosiery manufacturers.

We are now in a position to furnish on either a sale or rental basis, the NEW PARAMOUNT ALL-METAL TABLE with ANGLE-BASE ATTACHMENTS, plus an improved and different principle in Low Pressure Steam operation.

This NEW TABLE is made entirely of metal and the troughs are constructed from smooth, highly-polished aluminum. Aluminum is non-absorbent and tarnish-proof, which permits changing from colored to bleached goods by simply wiping out the troughs. All edges are rounded and there are no corners or pockets to collect dirt. The possibility of THREAD PULLING is positively eliminated.

The ANGLE-BASE ATTACHMENT allows the operative to see both sides of the stocking without moving the form. It facilitates and simplifies both boarding and stripping and promotes Quality Work.

The new Circulating System provides for uniform heating at all times, with unusually low steam pressure.

Upon request, we will be pleased to furnish further particulars.

PARAMOUNT TEXTILE MACHINERY CO.

Hunter Building

Market and Madison Streets, Chicago, Ill.

SPLIT FOOT

Half-Hose Product Illustrating Distinguishing Features

FULL SILK OR COMBINATION SILK BOOT & INSTEP
NO FRINGE TO PULL-THROUGH
MERCERIZED DOUBLE ADVANCED TOE
MERCERIZED SILK OR COMBINATION SILK
NO HARD SEAMS
FULL MERCERIZED DOUBLE HEEL, SOLE & TOE

ARE THESE FEATURES *INCORPORATED* IN YOUR HOSIERY?

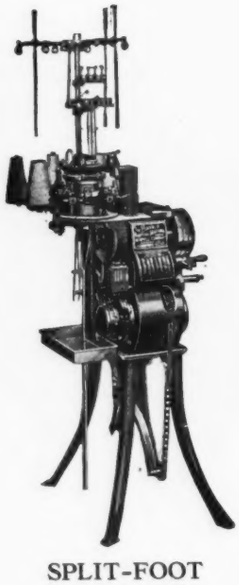
Through years of experience the "BANNER" Split-Foot machine was perfected to make hosiery second to none on the market.

Hosiery made with the split-foot principle is strong and flexible, no matter what material is used.

Absolutely free from all uncomfortable seams that are found in full fashioned stockings.

Make Split-Foot hosiery for lasting beauty, longer wear and greater comfort at a moderate price.

Your attention is called to the accompanying illustration which shows its features.



SPLIT-FOOT MACHINE

LET US DEMONSTRATE THESE FEATURES

HEMPHILL COMPANY

MAIN OFFICE AND FACTORY

PAWTUCKET, RHODE ISLAND

New York Sales and Show Rooms
350 Broadway, New York

Southern Office
James Bldg., Chattanooga, Tenn.

Philadelphia Sales and Show Rooms
Colonial Trust Bldg., 13th and Market Sts.

OBITUARY

William H. Barnes

William H. Barnes, treasurer of the Southern Mills Corp., Oxford, Ala., was killed Oct. 23 in an automobile accident. Mr. Barnes was well known in the textile industry. He was at one time Philadelphia manager of William E. Hooper & Sons, Baltimore, Md. The following resolution was adopted by the Board of Directors of the corporation upon receiving news of his death:

"It is with heavy hearts that we extend our sympathy to the family and friends of William H. Barnes. His untimely death makes the world poorer for he was a man who was clean both outside and inside. He neither looked up to the rich nor down to the poor. He was considerate of women, children and old people. He was too brave to lie and too generous to cheat. He was loyal and faithful. His word was a contract. He was a man. He will be missed. It was a delight to call him Friend. God's ways are not our ways and we never can understand them."

Israel S. Viall

Israel S. Viall, for many years prominently identified with the Cable Flax Mills, Schaghticoke, N. Y., died at his home following a brief illness. He was 80 years old. He had been in the employ of the company for nearly 25 years during which time he held the position as superintendent of various departments but for the last few years he had lived a retired life.

Silas Sitterly

Silas Sitterly, for years identified with the textile industry at Amsterdam, N. Y., died in that city after a brief illness. He was 73 years old. He had resided in Amsterdam for nearly 50 years and had held the position as foreman in several of the local textile plants. His last connection was as overseer of the picking room of Stephen Sanford & Sons, Inc.

Mrs. Francis F. Patterson

Word has been received here of the death, as the result of an automobile accident, of Mrs. Francis F. Patterson, Rosemary, N. C. Mr. Patterson is the son of Samuel F. Patterson, president of the Rosemary Mfg. Co., Roanoke Rapids, N. C., and other mills at Roanoke Rapids and Rosemary. Mr. and Mrs. Patterson were married about eighteen months ago.

Discuss Australian Wool

Sir James Elder, K. B. E., commissioner for the Commonwealth of Australia in the United States, was the guest of honor at a luncheon given by Frederick Watson, British Consul General, at the Down Town Club, Philadelphia,, Tuesday, Nov. 3. Sir James spoke in a very interesting manner of the developments in Australia dwelling upon the cordial relations existing between that country and the United States. He also spoke at length upon the problem confronting Australia in the marketing of its wool clip, and their efforts to stabilize prices, by the manner in which they have planned for the various auctions to be held for the world's buyers. He also told of the trend in that country to maintain the high-grade merino wool production, rather than the emphasis of war time upon raising mutton. He expressed great confidence in the future of the textile industry in the United States, and predicted a growing consumption of wool with an increased demand for its product. Among the textile men present at the luncheon, were Charles J. Webb, Charles J. Webb Sons Co. and the Kent Mfg. Co., Thos. H. Ball, president of the National Association of Worsted and Woolen Spinners, George Flint, Federal Knitting Co., C. W. Fisher, TEXTILE WORLD.

Cotton Movement

WASHINGTON, D. C.—The cotton movement from Aug. 1 to Oct. 30, as reported by the Department of Agriculture, was as follows:

	1925 Bales	1924 Bales
Port receipts	3,519,854	3,025,668
Port stocks	1,366,877	1,175,323
Interior receipts	4,412,103	3,784,065
Into sight	6,493,966	5,043,670
Northern spinners' takings	475,219	364,152
Southern spinners' takings	1,262,390	1,094,865
World's visible supply of American cotton	4,114,976	3,357,825

Active Wool Machinery

Washington, D. C.—The Department of Commerce has announced statistics on active and idle wool machinery for September, 1925, based on reports received from 940 manufacturers, operating 1,108 mills. This is exclusive of 13 manufacturers, operating 19 mills, who failed to report for the month. According to reliable textile directories for 1925, these nonreporting mills are equipped with about 3,554 looms, 137 sets of woolen cards, 19 worsted combs and 171,626 spindles. The total machinery reporting is 87,584 looms, 7,073 cards, 2,691 combs and 4,929,596 spindles. The data in percentage active follow:

Month	Looms			Sets of cards	Combs	Spinning spindles	
	Wider than 50 in. reed space	50 in. reed space or less	Carpet and rug			Woolen	Worsted
Per cent of total number of machines active							
September, 1925	68.4	69.8	69.8	81.5	73.6	78.9	72.5
August, 1925	63.8	70.3	71.9	80.2	75.2	77.6	68.1
September, 1924	64.9	73.8	73.7	81.3	72.5	79.3	66.5
Per cent of total hours active (maximum single-shift capacity)							
September, 1925	68.6	61.0	65.1	84.5	78.7	81.7	69.6
August, 1925	62.9	57.4	68.1	81.8	77.2	79.3	64.7
September, 1924	65.9	59.1	65.2	87.1	86.3	86.4	67.0

High Speed Re-winding

of

Silk, Cotton and Worsteds

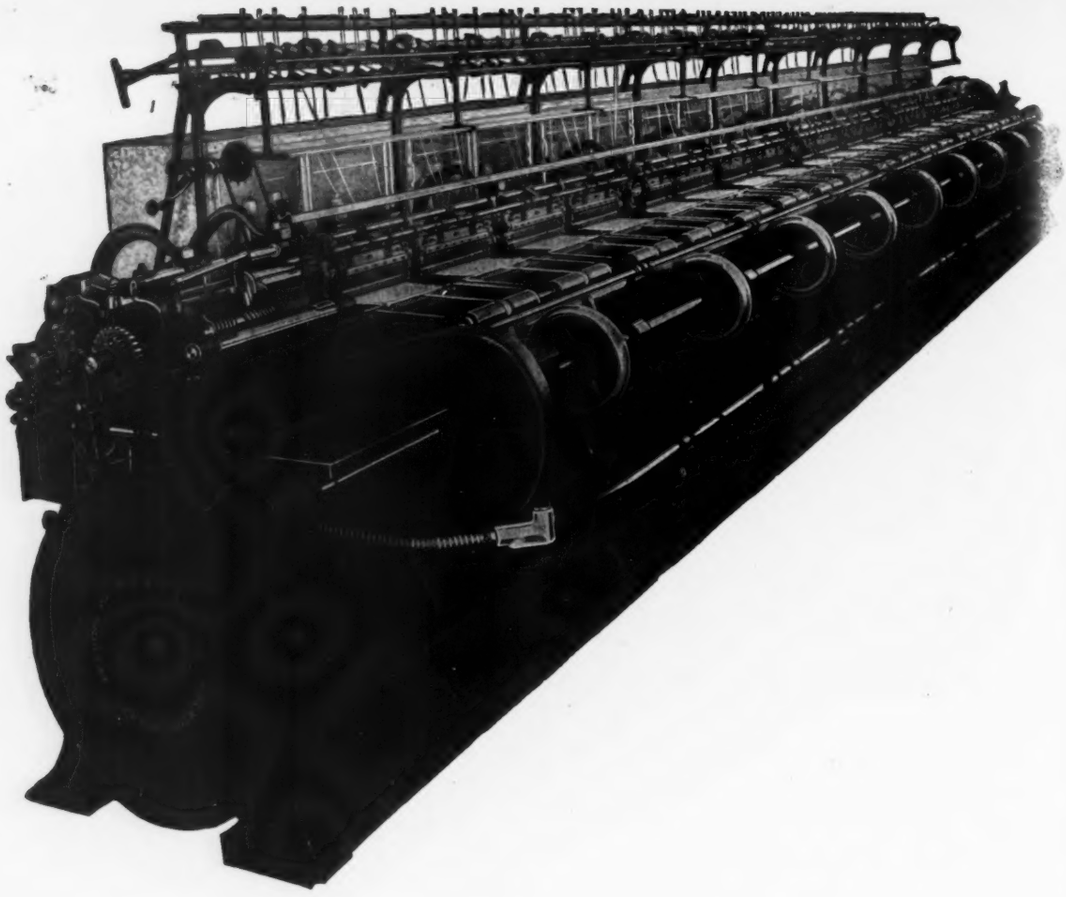
The Altemus 2-B Winder

(MODEL 2-B N-I No. 25)

Gives the following advantages:

1. Patented Mechanically Driven BUILDER GUIDE, does not touch the yarn at any stage of the "Building up."
2. Due to our new device (Patent applied for) a DEFINITE PERCENTAGE of Emulsion Application to yarn, IS CONSTANTLY GUARANTEED to each spindle wind.
3. Exceeds yardage per minute of competition winding.
4. Lays yarn accurately and smoothly.
5. Cone releases yarn equally.
6. Can be started at high speed without breaking ends of yarn.
7. Eliminates Tight and Loose Stitches, Uneven Pairing, Seconds and Press-offs and smash-up of needles.
8. Enables 12 Spindles to give same production as 18 Spindles, competitively wound.
9. Has Wet (emulsion) Spindle Speed of 1600 R. P. M. on 5 thread silk, (or other numbers of silk and cotton).
10. Has Dry Winding Speed of 1800 R. P. M.

JACOB K. ALTEMUS
Established 1888
WINDERS SPOOLERS WARPERS
Textile Machinery
BEAMERS & KINDRED MACHINERY
American St. below Lehigh Av., PHILADELPHIA, PA.



THE FINEST ladies' full-fashioned silk stockings in the world are made in the United States.

And ninety per cent of the manufacturers of these stockings use the Reading Full-Fashioned Hosiery Machines.

TEXTILE MACHINE WORKS
READING, PA.

The "READING"
FULL-FASHIONED HOSIERY MACHINE

SILK GOODS MARKETS

Cutters Using Flat Crepe and Georgette

Market is Generally Quiet With Fair Between-Season Inquiry Reported

The broadsilk market was rather quiet last week and sellers stated that they looked for no real change before the middle of November at the earliest. There is still some fall business to be completed, since a number of dress and suit houses are still working on fall styles where last minute inquiries from retail stores for immediate deliveries finds them without stock. This last minute inquiry has been a feature of the fall season, for both cutters and stores prepared conservatively, the former in regard to cutting stock and the latter as to putting it on his racks. This combination of factors has, according to trade information, resulted in much more active business during October than September when ordinarily most of the buying would be done. It has resulted likewise in a hold-over demand that will come in the market during November, many believe.

The fact that many dress and suit houses are still working on fall numbers, brings to the wholesale silk market a demand for satins and flat crepes. Other cutters are reporting good interest in winter resort lines which is resulting in sizable sales of radiums and prints together with the usual flat crepe and georgette. Georgette is being used liberally for evening wear for the winter season both in combination with the chiffon velvets and alone.

The spring openings indulged in by most of the larger style houses have so far resulted in no extensive business. Retailers came, saw, and admired—that is all. Making twelve trips to the wholesale markets a year, the latter see no real reason to buy liberally ahead. They see a good silk season ahead and confidently expect silk sales over the counter during the coming spring to break all sales records. They also can see just as plainly a preparation for this on the part of silk manufacturers that will insure adequate stocks of silks all through the season. There is no reason to look for any scarcity of silks with looms running night and day, so that the retail buyer is content to wait for a few months more before placing his orders.

Issue New Spring Card

Widder Bros., New York, manufacturers to crepe, have just issued to the trade their new color card for spring 1926. They show 72 spring shades in which they are now dyeing their crepes, qualities No. 115 and No. 125.

SILK SITUATION AT A GLANCE

PRODUCTION:	Slightly smaller.
DEMAND:	Only fair.
STOCKS:	Increasing but not heavy.
RAW SILK:	Stocks unchanged; prices easier.
SENTIMENT:	Record spring sales expected.

ACTIVE SILK STOCKS ON NEW YORK STOCK EXCHANGE
(Week ending Nov. 2)

1925 High	1925 Low	Stock	Sales	High	Low	Last
40⅝	37	Belding Bros.	6,100	38¼	37½	37¾
47½	30¾	Century Ribbon Mills	2,400	37⅞	33¼	35½
38⅜	18¾	Julius Kayser & Co.	2,800	38¼	36½	36⅞
37½	21⅝	H. R. Mallinson & Co.	2,500	25	24⅛	24¾
24¾	15¼	Van Raalte	200	22	22	22

Mid-Year Silk Trade Review

Silk Association of America Report Calls 1925 Distinctly a "Silk Year"

A REVIEW of the trade in its many divisions marks 1925 as unquestionably a silk year, says the recent Silk Association report. Speaking of the industry as a whole, business has exceeded even the optimistic forecast of the Mid-Year Report of 1924. With fashion and economy both advocating silk, its consumption has been abnormally large. The market has held firm, fluctuating within narrow margins. Consequently there has been established an unusual confidence in the silk industry.

Production of broad silks has been on the upgrade since the beginning of the year, hovering for the most part around 80% of mill capacity, which is a much higher average than it has been in years. Popular prices prevailed and the fashion requirement in yardage has been at a minimum. As a result, the outlay for a single silk garment was such that the average woman's silk wardrobe has expanded, opening up new opportunities for proving the satisfaction and superior qualities of silk.

The stability of the market was tested in the summer months when the usual dumping of distressed merchandise failed to materialize. A very encouraging increase in the booking of orders for future delivery is reported by broad silk men.

Prints and 54-inch widths were together features of the season in broad silks, and were mutually strengthening. They are becoming less active for fall wear, but there are preparations for reviving them with the spring. Stocks in broad silks today are normal.

Piece-dyed goods have held chief place in the finishing industry, although the demand for printed silks has never been equalled. Designs, it is agreed, have been made more appealing than ever to the consumer. Large florals on chiffon and georgette, with variegated and geometric designs for crepe de chine and foulard in vivid colors have been popular. The futuristic designs, while limited in demand, have grown more interesting. Printed damask brocade velvets

(Continued on page 146)

SUMMARY OF SILK CABLES

Best No. 1/X Yokohama	1990 Yen
Exchange at 3 m/s	42½
Cost C. I. F. New York	$6.70

The Yokohama market declined sharply last week and Best No. 1/X got under 2000 Yen for the first time in several months. The immediate cause for the drop was an equally sharp rise in Yen exchange which would naturally have a depressing effect on Yen quotation abroad. Actually the market is now down 90 Yen in the short space of 10 days. Transactions in the open market were fairly large amounting to over 5,000 bales despite the weak tone and the holiday on Saturday, Oct. 31. All deliveries on the Bourse shared the weakness of the open market, declining close to the 2000 Yen level with the accompaniment of an increased volume of trading. Canton prices were slightly lower with good buying, however, noted in the coarser sizes.

Raw Silk Lower

Prices Reduced as Yokohama Market Works Lower

Prices were lower in New York last week, importers and dealers reducing their quotations from 10c to 15c a pound. When first the weakness in Yokohama was noted there was a disposition to hold quotations in view of the higher exchange that cancelled the Yen drop, but as the decline assumed larger proportions there, sellers went even so far as to discount a further drop in prices.

Size 13-15 commanded a 20c premium still in New York but it was noticable that the discounts on warp sizes are getting smaller right along. Yellow silk that had been selling at a discount from white was quoted by some houses last week at a premium of 5c a pound. Prices follow:

(90 days basis)

Japan Filature, Grand Double Extra	13/15	$7 15
Japan Filature, Crack Double Extra	13/15	6 90
Japan Filature, Double Extra	13/15	6 85
Japan Filature, Best X	13/15	6 80
Japan Filature, X	13/15	6 70
Japan Filature, Best No. 1/X	13/15	6 70
Canton Filature, New Style	14/16	5 90
Canton Filature, New Style	20/22	5 70
Italian Grand Extra Classical		7 60
Tsatlee Reeel, "Blue Dragon and Flying Horse"		5 30
Tussah Filature, eight cocoon		3 20

Raw Silk Fluctuation Small During October

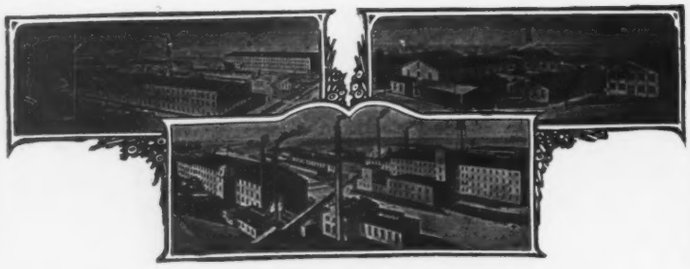
Taking its cue from September when fluctuations in raw silk were held within small limits, the raw market during October maintained the same steady tone that characterized dealings during the previous month. Crack XX 13/15 silk was firmly held above $7.00 ranging between this figure and $7.15 while Best 1/X 13/15 fluctuated between $6.75 and $6.90.

The generous discounts available on all 20/22 silk were still in force during the month, but it was noticeable toward the close of the period that there was a tendency for the two sizes to draw closer together. Moreover yellow silk in the 20/22 size in some cases later on was quoted at a 5c premium whereas earlier it had sold at a discount.

In one particular, however, October's market differed from the previous months. Marked strength was noted at the end of August and September in anticipation of bullish consumption figures. The end of October found the market weaker, but whether this was an attempt to discount a smaller consumption of raw silk during the month or merely a reflection of the easier trend in Yokohama where a sharp rise in exchange tended to depress Yen quotations on the Bourse and in the open market, is difficult to say. In any event the easier trend at the close of October cannot yet be said to indicate that the market will break out of the narrow limits maintained for the last 60 days.

The Kent Manufacturing Co.

(Established 1843)



Union Mills
Rockbourne Mills
Runnymede Mills
Clifton Heights, Pa.

Burmont Mills
Burmont, Pa.

Bedford Mills
Bedford City, Va.

Manufacturers of

Woolen Goods

Flannels—Suitings—Overcoatings—Tweeds, Etc.

Fine Worsted Yarns

(FRENCH SPUN)

For WEAVING and KNITTING

for

Cotton
Cotton Waste
Woolen Worsted
Asbestos Silk

CARD CLOTHING

Plough ground, side ground, deep ground and needle pointed cards a specialty.

JAMES TAYLOR & SONS (Cleckheaton) Ltd.
(Branch of Card Clothing & Belting Ltd.)
Woodroyd Mills, Cleckheaton, England

170-8

TEXTILE BANKING COMPANY

FACTORS

Fifty Union Square

New York

J. P. STEVENS & CO., Inc.

Commission Merchants

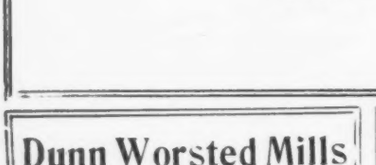
23 Thomas Street 25 Madison Avenue

NEW YORK

Dunn Worsted Mills

WOONSOCKET, R. I.

Fancy Worsteds



Piece Dyes

BATTEY, TRULL & CO.

Selling Agents

New York Office, 257 Fourth Ave.

Talbot Mills

NORTH BILLERICA, MASS.

FREDERIC S. CLARK, President

Thibets Uniform Cloths

TALBOT MILLS

Trade Mark Registered

ESTABLISHED 1857

Broadcloths Velours

Selling Agents
PARKER, WILDER & CO.
New York—Boston

L. F. DOMMERICH & CO.

Finance Account of Manufacturers and Merchants
Discounts and Guarantee Sales

General Offices

254 Fourth Avenue

NEW YORK

Established over 35 Years

W. Stursberg, Schell & Co.

Commission Merchants

Finance Manufacturers, Selling Direct or Through Agents
Everett Building, 45 East Seventeenth Street NEW YORK

WOOL GOODS MARKETS

Garment Men Want Particular Colors

Gracklehead and Lipstick Take Leadership and Command Premium—Otherwise Quiet

As usual after a season has gotten under way at retail, demand from the garment trade has lately been concentrating on nearby deliveries of fabrics of certain outstanding colors. This season the honors have been divided between "Lipstick" red and "Gracklehead" blue. Though the red had the best of the argument in October, it is stated now that the blue is distinctly in greatest demand with interest in the red falling off. It will be remembered that a year ago "Cranberry" was all the rage and the "Pansy" purple of last summer is fresh in mind. As anticipated last summer the vogue of purple at that time broke the back of demand for fall, though style authorities had originally promoted the purple as a fall color. Coatings and dress goods in lipstick and gracklehead have been good sellers. On such distinctive colors sellers have been unwilling to accumulate any stocks to speak of, and as a result the same inquiry goes from house to house in the trade giving the appearance of an even larger inquiry than actually exists.

Except for the wanted shades the market is fairly quiet. Popular varieties of bolivias in the popular red and blue shades command a sharp premium among second hands, nearly $1.00 being paid above mill prices for the fabrics on which demand has concentrated. Other fabrics remain dull. The election day holiday broke into the early part of the week now closing and rendered the market less active than otherwise. Mill agents find only scattered interest in forward deliveries. The fact that the Palm Beach season is almost open in the South, is inducing many cutters to wait for reports from there as to the way in which the spring novelties are received before going ahead on goods of this class for the regular spring season.

Women's Wear Notes

William F. Read & Sons Co. have opened their woman's wear fabrics for spring. An attractive twill called "Crespino," is priced at $3.75, and a similar cloth, somewhat heavier, is at $3.35. Other plain twills range from $2.60 to $3.75. In sport lines a rayon and worsted mixture in basket weave is priced at $4. Numbers on the crash order are offered at $2.50. Covert effects with rayon combinations range from $3.50 to $3.75. Mannish weaves in suitings and coatings are at $2.67½.

* * *

Victor Meyers, of the Fairfax Textile Mills, Inc., who now represents the Glenbrook Worsted Mills, Woonsocket, R. I., is showing 20 styles of tweeds and twist effects for spring. Plaids, chevrons and small designs of mannish character are prominent in the sports materials which are priced at $2.57½ to $3.37½. Sheen twills in coating and dressweights, in pastel, navy and black, are priced at $2.57½ to $2.97½.

* * *

The Clifton Woolen Mills are showing woman's wear fabrics for spring, including bright and pastel shades in jerseys, wool, crepes and lightweight twills termed "Pinpoint Gabardines." The last item is priced at $2.35.

* * *

Arthur G. Meyer & Co. opened on Wednesday spring woman's wear of the Groveland Woolen Mills and the Merrimac Woolen Corp., and on Thursday the lines of the Jamestown Worsted Mills and the Broadhead Worsted Mills. In the Groveland group fancy tweeds in geometric patterns are presented ranging from $1.85 to $2.00. Flannels range from $1.05 to $1.60. The Merrimac cashmere coatings and suitings in 12 to 13 ounce weights, with variations of marquetry, fancy block, basket and radio designs, are offered at $2 net.

* * *

W. J. Birmingham, Inc., are showing for spring a collection of women's wear fabrics produced by French mills at $3.95 to $6.25. Emphasis is laid on ribbed effects in worsted and cashmere types, as well as rayon border decorations. Rose tones are accorded first place.

* * *

Clarke & Dana, Inc., are offering in their new collection for spring women's wear a white chinchilla sports coating at $4.75, a novelty cheviot in white and colors is priced at $2.50. Plaid patterns with white or colored grounds in checked coatings are priced at $2.62½. Fancy flannels of mannish quality with silk plaid decoration on white or colored grounds, are priced at $3.75 in the narrow stripes. The wider striped cloths are quoted at $4. Repeat numbers include lightweight suede coatings at $2.25 in high shades, and flannels at $2.12½.

* * *

The serge is being given prominence in Paris women's wear showings and the effect of this influence on next season's trade will be carefully watched. The serge cycle must eventually come round again but merchants believe next season a bit early for it to fasten itself on the American trade.

Blanket Opening Soon

Blanket manufacturers are watching the raw material market closely because of the fact that they will shortly open their lines for the fall, 1926, season. When prices were named a year ago, wool was near its high point and the decline which set in during the first quarter of 1925, made such a deep impression on the blanket market that a downward revision of prices was necessary. Blanket men join the great mass of textile merchants in believing that prices must be made at the very lowest point in order to encourage distributor confidence and to achieve consumer distribution. It is hard to forecast what level leading blanket houses will establish, but the expectation is that it will not differ much from the present.

New Association in Women's Garment Trade

Formation of the Wholesale Women's Wear Association of America, was virtually completed at a meeting at the headquarters of the Cloak, Suit & Skirt Manufacturers' Protective Association in New York last Monday night. The new association will for a time limit itself to the organization of the cloak and suit industry on a more thorough basis than has ever before been attempted.

It is expected that one of the first subjects which the new association will take up is the advisability of having cloths delivered on a pre-shrunk basis. A few mills now do this but the majority do not and are not equipped to do it.

BRADFORD NEWS BY CABLE

Bradford, Eng., Nov. 4 (Special Cable to TEXTILE WORLD).—Piece goods turnover is well maintained and repeats are coming in satisfactorily. Season's trade looks like the best since the war. Some firms in Dewsbury and Huddersfield are working overtime. Improved demand for medium worsteds.

Bradford exports to United States in October were best since July. Tissues of wool and hair £145,428 compared with £94,543 in September. "Weekly Wool Chart" index number for October is 154, compared with 147 in September and 212 a year ago.

Mackinaw Cloths are Opened for Next Fall

American Woolen Joins Other Houses in Late October Opening—Retail Trade Active

In opening mackinaw cloths and wool shirtings late last week the American Woolen Co. departed from its policy of some year's standing of including these lines with its regular seasonal opening of suitings and coatings. The trades which use the mackinaws and shirtings have become accustomed to operate during November or earlier for the following fall season and the American has consequently made a move which will prove a convenience to its customers on these particular lines. The mackinaws and shirtings form an intermediate season something like the summer suiting business which precedes the regular spring openings by some weeks. They have until recently been largely used for distribution in the Northwest. They are still largely used there, but, in the form of plaid sport shirts and windbreakers, they have come into use in many parts of the country. It is confidently expected that they will find wide distribution during the coming season. The nature of the fabrics is such that many woolen mills are able to make them and unless the real strength of demand is carefully weighed they might easily be overdone.

Reports from clothiers are to the effect that they have been doing an excellent business with the retail trade. Much of the retail buying was left until the last moment and consequently buying during the last two months was greater than it would have been under the former policy of covering initial needs earlier in the year. Consumer buying of fall garments has improved greatly during the last few weeks according to reports. October just passed has been the best October with many retail clothiers that they have experienced in years. Clothiers say that collections from the retail trade are improving. In reference to advance spring business in clothing it is reported that orders already booked are 20 to 25% above those booked up to this time a year ago. The outlook for consumer absorption of merchandise is therefore good, but based, clothiers say, on a close maintenance of present prices.

Current business in primary circles is largely on spots. Prices are stiff with small advances here and there. More overcoatings are being sought, though time is now so short that breadth of choice is narrowing down. Sellers are encouraging the interest

(*Continued on page* 133)

For Unusual Conditions

The unusual conditions about your textile plant calls for the use of unusual paint.

Valdura Asphalt Paint

is unusual paint. It is the highest type of asphalt paint made. It is a paint you can rely on to give satisfactory service under the most trying and difficult paint conditions. VALDURA has a large covering capacity, is easy and clean to apply, is put up in convenient sized steel containers, can be furnished in colors, and is moderate in cost.

Many of the prominent textile mills use VALDURA year in and year out for varied purposes, and come to us with their difficult paint problems.

It may be we can solve yours. A card or letter will receive prompt attention.

American Asphalt Paint Co.
844 Rush Street Chicago
FACTORIES: LINCOLN, N. J.

"BIGELOW" MAPLE FLOORING

The Product of

Michigan Hard Rock Maple

The Hard Maple from this section excels the product from any other locality in the hard, even texture that insures the greatest durability and finest appearance. The well known wearing qualities of Hard Maple have made this wood ideal for FACTORY FLOORS.

Our facilities enable us to give prompt service on large quantities

KNEELAND - BIGELOW CO.
BAY CITY MICHIGAN

Four reasons why you should

Standardize on Shambow Shuttles

1. SUPERIOR QUALITY
2. PROMPT DELIVERY
3. INTELLIGENT SERVICE
4. ATTRACTIVE PRICES

After you have given Shambow Shuttles a thorough test you will never change to another make of shuttle.

You can make the test at our expense—ask us how!

SHAMBOW SHUTTLE CO., *Woonsocket, R. I.*
Warehouses and Salesrooms at
GREENVILLE, S. C.; PATERSON, N. J.

SCOTT TESTERS

The United States Standard Apparatus for tests of all Fabrics, Yarns, Twines, etc.

Used by every U. S. Government Department and standard equipment with practically every foreign government.

For both routine and experimental purposes they meet the requirements of the textile and rubber industry all over the world. Proven by years of continuous service to be Accurate, Simple and Easy to operate and Reliable under all Conditions.

Represented in New York by
UNITED STATES TESTING CO., INC.,
316 Hudson St., New York

HENRY L. SCOTT & CO.
PROVIDENCE, R. I.

COTTON GOODS MARKETS

Decline Checked by Advance in Cotton

Print Cloths More Firmly Held, but Business Continues Draggy and Featureless

Business in all branches of the gray goods market continues of small proportions, the entire trade waiting for the next Government cotton crop report on Monday. This report should determine fairly definitely whether or not cotton has touched the low point. It is general opinion that should the Government figure be in the neighborhood of 15,500,000 bales, as is expected, further declines in the staple are inevitable.

A number of constructions of gray goods were more firmly held at midweek as a result of two successive days of advancing prices on the cotton exchanges. The advance on Monday had the effect of halting the declining movement and on Wednesday mills were asking slightly higher prices on the relatively small lots of popular constructions available for nearby deliveries.

All branches of the gray goods market are still in a period of readjustment of price ideas. The strongly sold position of print cloths through the remainder of the year has prevented a quicker readjustment of prices to new raw material levels. According to converters the margin above costs on a poundage basis still permits of considerable contraction but with conditions as they are it is doubtful that the lower figures which many consider inescapable will be reached until well toward the close of the year.

No Cut in Flannels

Notwithstanding pessimistic statements from a few jobbers as to the ill effects on their business of the large cotton crop estimate of the Government, it is generally understood that wholesalers' volume continues to hold up well on seasonable merchandise. Clearance sales in Chicago have resulted in the movement of large quantities of goods at prices which are considered very fair in the primary market, due consideration being given to the nature of the offerings.

Merchandise such as blankets and flannels are understood to be moving well in jobbing and retail circles and reports of cut prices on some lines of flannels in the first hand market are apparently without foundation.

The report that an important line of flannels quoted at 12c was being quietly sold to favored customers at 11½c is entirely incorrect, according to a commission house handling the goods. It is declared that one lot of seconds was sold at this price to one jobber only and that this is all that was involved in the transaction.

Buying of staple colored goods is reported as fair in important sections. There is no reason to question the continued popularity of attractive prints, regardless of temporary ups and downs in their movement in the first hand market. Staple white goods continue quiet of course. On some lines of bleached goods which have not been reduced buyers find that they will be met half way in the matter of price, in cases where actual orders are involved.

Optimism on Rayons

The future of rayon mixtures is still hotly debated, but to the impartial observer there is little question about increased popularity for them in the dress goods field next spring. All through the latter part of the last wash goods season pessimists were persistently predicting an over production on alpacas which would kill these goods forever. Nothing of the kind happened, of course, and the present outlook is unquestionably for a good season in alpacas next spring.

It is surprising what a great amount of academic discussion continues in this market regarding technical features of rayon which are as a matter of fact no longer in the academic class. Large-production mills which insist upon thinking of rayon mixtures in comparison with ginghams, for example and which compare volume on the former with the very large individual orders which could be obtained on cheap ginghams, continue to talk of "rayons" as being over-done. Progressive merchants consider this an archaic and incorrect view-point.

Comparative Quotations

	Nov. 4	Oct. 28	Nov. 5, 1924
Spot Cotton, New York	20.45¢	20.60¢	23.90¢
Print Cloths:			
27- in., 64x60, 7.60 yd	6¾¢	6¾¢	6½¢
38½-in., 64x60, 5.35 yd	8¾-9⅛¢	9-9¼¢	8¾¢
39- in., 68x72, 4.75 yd	10-10¼¢	10⅜-10⅝¢	9¾¢
39- in., 72x76, 4.25 yd	11¾¢	12¢	11½-11⅝¢
39- in., 80x80, 4.00 yd	12¢	12¼-12½¢	12½¢
Brown Sheetings:			
36- in., 56x60, 4 yd	10½¢	10¾-11¢	10⅝-10¾¢
36- in., 48x48, 3 yd	12¢	12¼¢	13½¢
37- in., 48x48, 4 yd	9¾-10¢	9¾-10¢	10¼¢
Pajama Checks:			
36½-in., 72x80, 4.70 yd	10¼-10½¢	10½-10¾¢	10⅝¢
36½-in., 64x60, 5.75 yd	8¼-8½¢	8½-8¾¢	8⅝¢
Drills, 37-in., 3 yd	12½¢	12½¢	13¼-13½¢
Denims, 2.20s	19¢	19¢	*19-20¢
Tickings, 8 oz	24¢	24¢	*24½-26¢
Standard Prints	9½¢	9½¢	10¢
Eastern staple ginghams, 27-in	11¢		10½¢

* Nominal.

Cotton Goods Notes

Celebrating the 30th anniversary of the founding of the business, an attractive brochure has been prepared describing the development of the Cone group of mills of Greensboro, N. C. The booklet is dedicated to Moses and Ceasar Cone, the founders of the industry which today manufactures one-third of all the denims made in the world. A detailed description is given of the welfare service of the Cone mills and the story of the formation of the Cone Export & Commission Co. is given a prominent place in the booklet. The booklet is profusely illustrated and is a complete story of the manufacture of denims.

* * *

B. B. Sleifer, who has been in charge of the Hamilton Woolen Co. account for many years, has become associated with Amory, Browne & Co., the new selling agents. Amory, Browne & Co. announce the following organization, in addition to Mr. Sleifer, to specialize on the Hamilton goods: Tracy Durnell, E. L. McCoy, Ray Loveridge, and F. B. Raynor. Edward Hays, until recently New York representative for the Parker Mills, Fall River, is now associated with Amory, Browne & Co.

* * *

Garner & Co. are showing their lines of cretonnes for next season, the new goods featuring bright colors more than ever. Prominence is given to large florals in merchandise to be used for garment purposes. The Harmony line is featured by a showing of new rayon draperies.

* * *

H. B. Schaeffer, formerly with the Stockton Commission Co., Inc. has been appointed New York sales manager for the Spencer Mills, Spindale, N. C.

* * *

Charles Whitney Dall of Ridley, Watts & Co. chairman of the cottons group of the Textile Division for the Ninth Annual Roll Call of the American Red Cross, has appointed the following committee to assist him: J. E. Rousmaniere of Lawrence & Co.; Eben Whitman of the Wm. Whitman Co., Inc.; Bertram H. Borden of M. C. D. Borden & Sons; Jacques Bramhall of Amory, Browne & Co.; and Gerrish Milliken of Deering, Milliken & Co. These members will divide among them the cotton goods firms of New York so that they may cover them thoroughly for funds for the Red Cross.

* * *

Nathaniel R. Wilkes and Gustave L. Hoffman are in charge of a new department, known as the Wilkes & Hoffman Dept., that has been opened in New York by the National Fabric & Finishing Co., Inc., to specialize in draperies, damasks, cretonnes, satines, tickings, etc. Messrs. Wilkes and Hoffman were, until recently, directors of Titus, Blatter & Co., New York. Mr. Wilkes, on Oct. 27, was elected a member of the board of directors of the National Fabric & Finishing Co., Inc.

PHILADELPHIA, PA. Application for a charter will be made on Nov. 23, 1925, for an intended company to be called the Bell-Nutter Mfg. Co., to manufacture and sell hammocks, bedding, etc.

PHILADELPHIA, PA. A trustee's sale in bankruptcy of the machinery and equipment of the Crossingham Knitting Mills, 247 E. Ashmead St., formerly manufacturers of cotton and worsted underwear, will be held on the premises, at 10 A. M., Nov. 13, 1925, being conducted under direction of Samuel T. Freeman & Co., auctioneers. W. Wendell Forrest, is trustee.

MANCHESTER NEWS BY CABLE

Manchester, Eng., Nov. 4 (Special Cable to TEXTILE WORLD).—Traders still hold bearish views. Orders are withheld pending next Bureau report. Short interest is increasing. Cloth dealers in India keeping in close touch with Manchester rates. Bids for big quantities, but terms suggested are impracticable. China market is idle. Unsatisfactory advices from Egypt and Near East. Only retail sales for South America. Less activity for European countries.

Leading authorities believe however that when prices steady, world markets will be prepared to restock their shelves. Question of advertising Lancashire cotton goods in world markets is referred to permanent joint cotton committee which consists of representatives of all branches of industry. Index number for the week is 169.

Sews *heavy* goods

Designed by the head finisher of a large New England woolen mill, the Dinsmore Improved Gear-type Rotary Machine has met with marked success.

It has proved a practical and effective machine for sewing heavy cotton and woolen goods, cotton ducks, woolen and cotton blankets, artificial leather, etc.

This heavy duty machine is operated by foot power and sews any fabric, thick or thin, wet or dry. It is simply and carefully constructed, the gears being accurately machined. A noteworthy feature is the very heavy base permitting of easy moving from place to place without danger of tipping over. Our line is most extensive. A catalog is yours upon request.

See pages 218-9 of the Consolidated Textile Catalogs

DINSMORE MFG. CO.
Salem, Mass.

Southern Representative
W. A. Kennedy, 1106 Johnston Bldg.,
Charlotte, N. C.

Hood Service Scores A Goal

"If it's Hood It's Good."

Forty years of practice have given Hood the ability to score a goal on every order. The result is satisfied customers. Our specialty is Comb Circles and Fallers.

ESTABLISHED 1881 R.H. HOOD CO. INCORPORATED

19th and Westmoreland Sts.
Philadelphia

Specify—

SAWYER GOODMAN MARINETTE

OUR SPECIALTY—Standard or Special Sizes for Textile Plants

HARD MAPLE FLOORING

SAWYER GOODMAN COMPANY
Marinette, Wisconsin

PERMA-TITE

SELF-LOCKING NUTS

A New England mill tried these nuts on the picking ball bolt on their looms, and after two years write us "judging from the appearance, this nut would stay in place years longer."

A Perma-tite Nut maintains a positive tight grip on the bolt thread. As easy to put on and take off as a plain nut. Vibration causes them to hold tighter.

Have you a more difficult condition for a sample test?
Write for our price list and circular showing the different uses where Perma-tite Nuts may be used.

INDUSTRIAL LOCK NUT CO.
SOUTH HANOVER, MASS.

KNITTING MACHINERY FOR HOSIERY SWEATERS JERSEYS TOQUES SPECIALTIES

CREELMANS LIMITED
MANUFACTURERS

Canadian Agents for
HEPWORTH CONSTANT DIAL LOOPERS
Georgetown, Ontario

Est'd 1872 Dept. 1154

LATCH NEEDLES FOR EXACTING KNITTERS

Century Drinking Fountains

With Patented Bubbler Heads

Non-Squirting—Easy to regulate—saves water. Big things to consider in purchasing drinking equipment. Century bubblers are self draining, the water will not squirt if the hand is placed over the holes in the bubbler head.

To regulate the flow of water it is merely necessary to unscrew the cap and turn the adjusting screw.

The special patented flow control saves water and gives a more satisfying drink than any other bubbler.

The group fountain illustrated above is designed for use in textile mills. One installed near each large group of workers will save much valuable time.

Ask for a free copy of catalogue which gives full specifications.

CENTURY BRASS WORKS, Inc.
970 N. Illinois Street, Belleville, Ill.

A. M. LAW & COMPANY

SPARTANBURG, S. C.

SOUTHERN COTTON MILL SHARES

Bought and Sold Outright or on Commission
Correspondence Solicited

BALING PRESS

(HYDRAULIC)

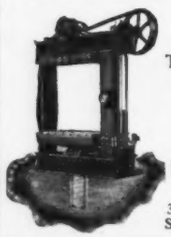
50 to 300 TONS PRESSURE

With or without motor

Size to suit your work

Ask us about them

Dunning & Boschert Press Co., Inc.
388 West Water St.
SYRACUSE, N. Y., U. S. A.



Telephone Main 3593 Established 1854
CROSBY & GREGORY
HEARD, SMITH & TENNANT
PATENTS
Old South Building, Boston
Patents and Patent Cases - Trade Marks - Copyrights
Special Attention to Textile Invention

WATSON E. COLEMAN
Registered Patent Lawyer
644 G Street, Washington, D. C.
Opposite U. S. Patent Office.
Highest references. Best results.
Promptness assured.
Patents and Patent Law. Trade-marks Registered

FINANCIAL MARKETS

Quiet Trading in Textile Shares

Poor Amoskeag Showing and Inventory Adjustments to Meet Cotton Decline Interpreted Bearishly

BOSTON, Nov. 4.—The rather heavy manufacturing loss suffered by Amoskeag in its fiscal year just closed together with the disappointing forecast of Treasurer Dumaine on the outlook have exerted an effect on investment interest in textiles that is entirely out of proportion to their importance. The same may be said of the reported drastic inventory readjustments by this and other New England cotton mills to meet the radical decline in raw cotton prices; many investors have appeared to interpret the latter action as meaning that the majority of New England cotton mills are loaded up with raw cotton and must take large losses that will seriously restrict their earning power during the balance of the current cotton season, whereas exactly the opposite is the case and the majority are in a position to profit to the fullest extent by current and possible future low cotton values and the relatively wide margin that now exists between the raw material and the price of the finished product. Amoskeag, Pepperell, Massachusetts and other leading New England cotton mills that have reported drastic inventory readjustments are really adjusting themselves to a rock bottom basis that will enable them to take full advantage of cheap cotton and the increased volume of business and larger profits that should result therefrom.

Following the radical decline in wool last winter and spring the leading woolen and worsted mills took similar inventory action, although the majority of the latter were carrying relatively smaller inventories of raw material and finished goods than are most cotton mills today. American Woolen, Arlington, Pacific and other leading New England manufacturers of both woolen and worsted goods are in the best kind of a position to take full advantage of recent and current raw material values and of the increasing volume of business that seems certain to be enjoyed during the next heavyweight season, and to a lesser extent during the current lightweight season.

Financial Notes

The National Fabric & Finishing Co., operating the Lowell Blecahery, has voted to pass the 2% common dividend due Nov. 15. After shrinkage of inventory and setting aside $135,000 reserve, for depreciation on fixed assets the company showed earnings for its first year of about 3½% and President Coolidge states that contemplated operating economies to be put into effect should "be very helpful to the results of the coming year's business."

It is reported that the United States Worsted Co. broke even on its September operations and expects to do as well during the balance of the year. For the first half of the company's fiscal year there was a deficit of about $250,000 after interest, depreciation and all charges. The company reports current assets of approximately $5,200,000 and total liabilities of $4,100,000, the balance of $1,100,000 being equivalent to about $44 a share for the 24,940 shares of first preferred stock.

The decision of the Massachusetts Cotton Mills, Lowell, Mass., to pass its quarterly dividend due Nov. 10 was dictated by the fact that dividends paid during 1924 were taken from surplus account as was a large part of the three quarterly dividends paid thus far in 1925. The company's operations for the nine months ended September 30 showed a small operating profit after adjusting inventory to present market prices. The company's net quick assets at present are said to be over $4,000,000.

Boston Stock Auctions

The following sales of textile shares were made at Wednesday's auctions:

Shrs.	Mill	Par	Price	Change
17	Boston	100	85	— 7¼
20	Naumkeag	100	193	.....
16	Manomet	100	43@42½	+ 8¼
20	Potomska	100	103½	.....
7	Pepperell	100	142½@142	+ 2⅞
37	Nonquitt	100	69@71	+13½
6	Union	100	119	+ 7½
61	Am. Mfg., com.	100	109¼	+ 1¼
184	Total.			

Dividends Declared

Mill	Period	Rate	Stock	Payable	To stock of
Shawmut	Q	1¾%	pfd.	Dec. 31	Dec. 21
Shawmut	Q	1½%	com.	Jan. 2	Dec. 21
Pacific	Q	75c	com.	Dec. 1	Nov. 18
Merrimack	Q	$1.75	com.	Dec. 1	Nov. 2
Ludlow	Q	$2.50	com.	Dec. 1	Nov. 4

Mill Shares Firm

New Bedford Stocks Continue to Gain in Strength

NEW BEDFORD, MASS.—That investors in textile securities are showing a return of confidence in cotton manufacturing corporations has been evidenced by the continued demand noted for New Bedford issues during the last few weeks. During the months of September and October, mill shares of the cotton manufacturing plants of this city have registered a more consistent gain than at any other period this year, and some of them are now commanding the highest prices they having known during 1925. The inquiry has not been confined to the corporations that are on a dividend-paying basis, but has been along general lines, including some of the corporations that have not yielded any returns in any of the four quarters of the fiscal year.

Increase in Production

Increased production at many of the plants has had a tendency to restore confidence in the market, and at some of the mills night work has been the case to take care of pressing orders on the books. Just how long the increased production will prevail is merely a matter of conjecture, and there is fear in some quarters that cancellations of some of the orders may be forthcoming owing to the decline in the price of raw material. Otherwise, many of the mills of this city have orders on the books that will carry them well into 1926.

A number of the mills have their annual meeting of stockholders scheduled for this month, and the issuing of the financial statements is being awaited with much interest, as they are expected to reflect the showing of the mills in general for the last 12 months. The general upward tendency starting in September has been steadily maintained during the intervening period, and the strength shown by the yarn issues has been one of the most gratifying features of the situation in the last few weeks.

Activity in Nashawena

Considerable activity in Nashawena has been noted with sales at 113 and 113½, without dividend. The present asking price of the stock is 115, being bid at 112. Nashawena is paying the regular $2 dividend for the fourth quarter, but Manomet and Nonquitt, the other Whitman controlled plants in New Bedford, have again passed the dividends. Following this action by the directors, Nonquitt eased off a trifle, selling from 68 to 71, compared with more recent sales around 75. It had been anticipated in some quarters that Nonquitt might resume its dividend paying policy for the fourth quarter, but the shareholders have not had a disbursement since the early part of 1924.

Manomet has been selling at 41, 42 and 43, with more shares available at 43. The bid price of 39 shows a slight gain during the week. Gosnold common, another stock that has not yielded a dividend for more than a year, is improving in strength, being bid at 77½, a gain for the week of 5 points, with sales reported around the 80 figure. Gosnold preferred is now held for practically the same as the common, with little trading reported. Wamsutta sold at 97, and more shares are offered at 100. Butler shows a slight gain in strength and is sought at 124, at which price a number of shares changed hands.

Dartmouth common is selling at 160, registering a slight gain over previous sales, the present asking price being 162. Potomska has passed the 100 mark, changing hands as high as 102 and being bid at 100, or an advance of 5 points. Sharp common finds a ready market at a figure anywhere the 50 mark, with Sharp preferred selling as high as 77. Kilburn is now commanding 140, the bid price of 137½ gaining 5 points during the past week. City and Quissett both remain quiet, little stock being offered in either of these issues.

Rise of Shares Continues

GASTONIA, N. C.—The rise in cotton mill shares continues to attract outside interest, and this together with buying by Carolina investors is responsible for a further gain of 66c per share in the weekly average of 25 active stocks, according to figures released by R. S. Dickson & Co. Last week's average is 117.94 compared with 113.28 in July of this year. The continued rise in mill shares, in face of the enforced curtailment in mill operations, due to lack of power, lends encouragement to the expectation of a still wider demand for mill shares when full time operations are resumed. The general opinion of mill executives is that the longer the enforced curtailment lasts, the greater will be the demand for goods, and perhaps at a greater margin of profit to the mills.

New England Textile Stocks

(Quotations based upon last sales at Boston public auction and Boston Stock Exchange.)

	Latest Sales	Prev. Sales
American Woolen, pfd.	93¼	94
Amoskeag, com.	72¼	77
Androscoggin	125	132
Appleton	†720	760
Arlington	102	101¼
Bates	228½	225
Bigelow-Hartford, pfd.	102	103
Boott	†135½	...
Edwards	115	110
Esmond, pfd	100¼	93½
Everett	57	57
Farr Alpaca	182¼	182
Great Falls	18	17
Hamilton Woolen	86	95½
Hamilton Mfg.	18½	34
Hill	25	24¼
N. E. Southern, pfd.	38	38
Ipswich, com.	55½	25
Lawrence	47⅝	50
Ludlow Associates	168	161½
Lyman	124⅜	122
Massachusetts	72⅜	96⅝
Merrimack	102	98¼
Nashua Mfg. Co., com.	69½	70
Naumkeag	193	193
Newmarket	134	137½
Pacific	60	62
Pepperell	142	139
Plymouth Cordage	127½	127
Tremont & Suffolk	43⅛	108¾
York	77	78¾

† Old sale at variance with present bid and asked price.

Fall River Mill Stocks

(Quotations furnished by G. M. Haffords & Co.)

	Bid	Asked
American Linen Co.	...	30
Arkwright Mills	5	...
Barnard Mfg. Co.	...	60
Border City Mfg. Co.	...	75
Borden Mfg. Co., Richard	...	...
Bourne Mills Co.	100	...
Chace Mills	...	45
Charlton Mills	...	...
Cornell Mills	100	105
Davis Mills	95	...
Davol Mills	...	50
Flint Mills	102	108

GEORGE C. BELL

Mill Engineer and Architect

420 Piedmont Building, Charlotte, N. C.

Plans and specifications furnished for the construction and equipment of
COTTON, YARN AND WEAVING MILLS
MERCERIZING, BLEACHING AND DYE WORKS

Old mills reorganized, extended and appraised. Mill village development.
Water and sewage disposal systems.

WARREN B. LEWIS

CONSULTING ENGINEER

Textile Plants *Steam and Electric Power Plant*

For over twenty years this organization has been engaged in the work of improving mechanical conditions in industrial plants, through the systematic study of machines and industrial operations.

It is still equipped to render this service with the effectiveness resulting from knowledge and experience.

PROVIDENCE, RHODE ISLAND

BIGELOW, KENT, WILLARD & CO.

CONSULTING ENGINEERS AND ACCOUNTANTS

SPECIALISTS IN TEXTILE PROBLEMS

Production — Costs — Sales
Building Design — Valuations — Audits
Financing

PARK SQUARE BUILDING
BOSTON, MASSACHUSETTS

Lead and Lead Lined Equipment Chemical Lead Burning

Lead Lined Tanks, Lead Linings for Tanks, Vats, etc. Lead Coils, Lead Sleeves, Agitators.
Lead and Lead Lined Pipe and Fittings. Pure Tin Linings for Vessels of Every Character.

Specialists in lead chemical equipment. Experienced in the design of non-corrosive equipment for the textile mill. Our products cover practically everything in the chemical line, where lead is used.

JOHN F. ABERNETHY & CO., Inc.
708-710 Myrtle Ave. Brooklyn, N. Y.

James Chittick

Consulting Textile Specialist

122-124 East 25th St., N. Y. Tel. 2785 Mad. Sq.

PRIVATE TEXTILE INSTRUCTION

Fabrics Analyzed. Expert Testimony. Damages Investigated. Costs Calculated. Textile Lectures. Mill Forms. Business Literature Written. Mills Visited and Reported on.

Everything in Textiles

Cottons—Silks—Woolens—Linens—Pile Fabrics, Etc.

Author and publisher of "Silk Manufacturing and Its Problems."
Full Octavo. Handsomely Bound. 580 Pages. $3.00 Delivered.

Reliable Humidifying Devices

Since 1888

also

Better Textile Dryers

Manufactured by GRINNELL COMPANY, Inc.

AMERICAN MOISTENING COMPANY

Atlanta, Georgia — Boston, Massachusetts — Charlotte, North Carolina

SPECIALIZING
IN THE SOLVING OF TEXTILE PROBLEMS FOR MANUFACTURER, FINISHER AND DISTRIBUTOR

James W. Cox, Jr. Textile Engineer
320 Broadway, New York

FRANKLIN MACHINE COMPANY

ENGINEERS :: FOUNDERS :: MACHINISTS

PROVIDENCE, R. I.

Manufacturers of Transmission Machinery, Spun Silk Machinery, French Worsted Drawing Frames (Frotteurs), Ball Winding Machines, Shoe Lace Tipping Machines, Yarn Dressers, Wool Top Baling Presses, Yarn Baling Presses, Special Textile Machinery, Corliss Steam Engines, Worm Gears and Worm Gear Reduction Units, TEXTILE PRINTING MACHINERY.

Machinery for Dyeing Yarn in the Skein

DAY AND ZIMMERMANN, INC.

Engineers

NEW YORK PHILADELPHIA CHICAGO

ENGINEERING - CONSTRUCTION - REPORTS - MANAGEMENT - VALUATIONS

HERBERT S. KIMBALL

M. AM. SOC. C. E.

CHEMICAL AND MECHANICAL ENGINEER
177 State Street, Boston, Mass.

RAYON PLANTS

Research, Design and Equipment Layouts

W. E. S. DYER

MILL ENGINEER and ARCHITECT

Design, Specifications and Superintendence for Textile Mills, Industrial Plants and Kindred Structures.

Reorganizations, Valuations and Reports on Mill properties. Power Plants of every description and directions for their economy of operation.

Land Title Building PHILADELPHIA, PA.

Carrier Engineering Corporation

750 FRELINGHUYSEN AVE.
NEWARK, N. J.

BOSTON NEW YORK BUFFALO
PHILADELPHIA CHICAGO

Air Conditioning

(MANUFACTURED WEATHER)

HUMIDIFICATION CLEANING
WINTER HEATING SUMMER COOLING

Bulletins upon Request

Federal Engineering Company

Architectural Engineers

Design and Superintendence for
Textile Mills and Industrial Plants

318 Stephenson Building MILWAUKEE, WIS.

Boiler Flues, Shafts, Pulleys, Hangers, Belting, Packing, Lacing, Pumps, Injectors.

BOILERS

Tank and Stack, Pipe, Mill Supplies. For Mills and Public Works. Low Prices.

Cotton, Oil, Gin, Saw, Grist, Fertilizer, Mill Machinery, Supplies & Repairs & Castings
LOMBARD FOUNDRY, MACHINE, BOILER WORKS AND MILL SUPPLY STORE, AUGUSTA, GA.
Capacity 200 hands Three Hundred Thousand Feet Floor Space

Financial Markets—Continued

Flint Mills, Rights	33	35
Granite Mills	70	76
King Philip Mills	155	...
Laurel Lake Mills (com.)	...	15
Lincoln Mfg. Co.	...	90
Luther Mfg. Co.	120	...
Mechanics Mills	40	50
Merchants Mfg. Co.	77	85
Narragansett Mills	...	90
Osborn Mills	...	75
Parker Mills, com.	...	15
Parker Mills (pfd.)	...	40
Pilgrim Mills (com.)	...	...
Pocasset Mfg. Co.	...	88
Sagamore Mfg. Co.	...	...
Seaconnet Mills	...	5
Shove Mills	...	45
Stafford Mills	25	...
Stevens Mfg. Co.	120	126
Union Cotton Mfg. Co.	112	...
Union Cotton, Rights	38	40
Wampanoag Mills	...	50
Weetamoe Mills	25	...

New Bedford Quotations

(Quotations furnished by Sanford & Kelly)

	Bid	Asked
Acushnet Mills	96	100
Beacon Mfg. Co., com.	125	...
Beacon Mfg. Co., pfd.	...	101
Booth Mfg. Co., com.	122½	...
Booth Mfg. Co., pfd.	100	...
Bristol Mfg. Co., pfd.	185	200
Butler Mfg. Co.	124	...
City Mfg. Co.	112½	...
Dartmouth Mfg. Co., com.	157	162
Dartmouth Mfg. Co., pfd.	85	...
Fairhaven Mills, pfd.	21	...
Fairhaven Mills, com.	...	25
Gosnold Mfg. Co., com.	77½	85
Gosnold Mfg. Co., pfd.	81	86
Grinnell Mfg. Co.	113	117
Hathway Mfg. Co.	116	...
Holmes Mfg. Co., com.	97½	...
Holmes Mfg. Co., pfd.	92½	...
Kilburn Mill	137½	145
Manomet Mills	39	43
Nashawena Mills	112	115
Nelld Mills	215	...
N. B. Cotton Mills, com.	100	...
N. B. Cotton Mills, pfd.	97½	...
Nonquitt Spinning Co.	69	72
Pemaquid Mills	...	26
Pierce Mills	420	...
Potomska Mills	100	104
Quissett Mills, com.	155	165
Quisset Mills, pfd.	100	...
Sharp Mfg. Co., com.	50	54
Sharp Mfg. Co., pfd.	72½	77½
Soule Mills	185	200
Taber Mills	112	115
Wamsutta Mills	96½	100
Whitman Mills	98	102

Southern Mill Stocks

(Quotations furnished by A. M. Law & Co., Inc., Spartanburg, S. C.)

	Bid	Asked
Abbeville Cotton Mills	100	105
American Spinning Co.	240	250
Anderson Cotton Mills	85	88
Arcade Cotton Mills	75	80
Arcadia Mills	245	250
Arcadia Mills, pfd.	102	105
Arkwright Mills	100	105
Augusta Factory, Ga.	20	30
Avondale Mills, Ala.	900	950
Beaumont Mfg. Co.	310	...
Belton Mills	60	62
Belton Mills, pfd.	97	99
Bibb Mfg. Co.	190	205
Brandon Mills, pfd.	98	101
Calhoun Mills	117	121
Chesne Mills	140	145
Chiquola Mfg. Co.	285	300
Chiquola Mfg. Co., pfd.	97	99
Clifton Mfg. Co.	140	145
Clinton Cotton Mills	250	...
Columbus Mfg. Co., Ga.	137	141
Cowpens Mills	59	63
D. E. Converse Co.	110	112
Dallas Mfg. Co., Ala.	130	140
Darlington Mfg. Co.	85	90
Drayton Mills	100	...
Dunian Mills	91	93
Dunian Mills, pfd.	94	96
Eagle & Phenix Mills, Ga.	...	145
Easley Cotton Mills, pfd.	89	91
Enterprise Mfg. Co., Ga.	100	110
Gaffney Mfg. Co.	84	87
Gainesville Cotton Mills, Pa.	165	175
Glenwood Mills	120	130
Glenk Mills	90	92
Graniteville Mfg. Co.	135	...
Greenwood Cotton Mills	400	...
Grendel Mills	250	...
Grendel Mills pfd. (par $50)	49	51
Hamrick Mills	130	135
Hartsville Cotton Mills	149	160
Inman Mills	155	165
Inman Mills, pfd.	102	...
Jackson Mills	200	...
Judson Mills	192	195
Judson Mills, pfd.	103	106
King, John P. Mfg. Co., Ga.	115	125
Laurens Cotton Mills	150	...
Limestone Cotton Mills	130	135
Marion Mfg. Co., N. C.	140	...
Marlboro Mills	45	50
Mills Mill	275	300
Mollohon Mfg. Co.	101	105
Monarch Mills	127	132
Monarch Mills, pfd.	102	105
Musgrove Cotton Mills	68	72
Newberry Cotton Mills	128	131
Ninety-Six Mills	150	...
Norris Cotton Mills	...	84
Orr Cotton Mills	103	105
Orr Cotton Mills, pfd.	97	99
Pacolet Mfg. Co.	200	214
Pacolet Mfg. Co., pfd.	103	106
Panola Cotton Mills, Class A. pfd. (par $85)	82	85
Pelham Mills	18	21
Pickens Cotton Mills	120	126
Piedmont Mfg. Co.	140	145
Poe, F. W. Mfg. Co.	109	113
Polnsett Mills	90	95
Riverside Mills (par $12.50)	9½	10¼
Riverside and Dan River	190	200
Saxon Mills	84	87
Sibley Mfg. Co., Ga.	60	70
Spartan Mills	149	160
Toxaway Mills (par $25)	32	31
Union-Buffalo Mills	...	55
Union-Buffalo Mills, 1st pfd.	94	95½
Union-Buffalo Mills, 2nd pfd.	50	52
Victor-Monaghan Co.	106	107½
Victor-Monaghan Co., pfd.	107	110
Ware Shoals Mfg. Co.	142	146
Watts Mills	...	70
Watts Mills, 1st pfd.	89	91
Watts Mills, 2nd pfd.	120	130
Whitney Mfg. Co.	90	95
Williamston Mills	195	...
Woodruff Cotton Mills	140	145
Woodside Cotton Mills Co.	109	112
Woodside Cotton Mills Co., pfd	88	90

DIVIDEND NOTICE

PACIFIC MILLS

A quarterly dividend of seventy-five cents (75c) per share has been declared payable December 1, 1925 at The New England Trust Company Transfer Agents, 135 Devonshire Street, Boston, to stockholders of record November 18, 1925.

Boston, November 2, 1925.

Edwin Farnham Greene, Treasurer.

Business News

Diamond Chain & Mfg. Co. Appointments

H. I. Markey has recently been made district manager for the Diamond Chain and Mfg. Co., Indianapolis, of the New York territory with offices at 1011 Chestnut St., Philadelphia. Frank Smiley succeeds Mr. Markey as district manager of the west central territory. The company also announces the appointment of J. W. Vaughan, 415 Masonic Temple, Greenville, S. C., to represent them in the textile industry. Mr. Vaughan is an engineer well equipped to give advice on the application of Diamond high speed roller chains to the power transmission problems of textile mills.

Buys Worsted Spinning Mill

The complete worsted spinning plant of Joseph Harrison & Sons, Inc., Passaic, N. J., spinners of worsted yarns, which recently was placed in the hands of receivers, has been purchased by Edward Jefferson, Inc., Philadelphia. The equipment which consists of about 3600 spindles, with complementary machinery, is being offered for sale as an entirety, or in part.

PORT HENRY, N. Y. The Adirondack Power and Light Corp. has purchased the property of the Port Henry Power Co. and will continue to supply hydro-electric operating power to textile and industrial plants in this section. The company plans for 50,000 additional h.p. for supplying manufacturing interests.

ENFIELD, MASS. L. S. Walsh and J. V. Riley, treasurer and agent respectively of the Beacon Woolen Co., have turned over their interests in the company to its selling agents, the Federal Fabrics Corp., New York.

High Ceiling Type Wing Featherweight Unit Heater. Supported from roof or ceiling beams by eight small bolts. Quickly installed without alterations or extensive piping.

Wing Featherweight Unit Heaters Save Heat Thru Ease of Control!

Most direct radiator systems are designed for maintaining 60 or 70 degrees in zero weather. But in mild or average winter weather this excess heat is not needed and it is necessary to turn off a great number of radiator valves to meet the reduced demand. Such a task is a tedious one, dependent upon the human element, and in consequence is neglected. Instead, windows are opened and the heat allowed to escape.

This heat waste is eliminated with Wing Featherweight Unit Heaters because they are easily controlled — THE SNAP OF A SWITCH TURNS OFF THE HEAT!

Fans and Exhausters *Small Turbines*

L. J. Wing Mfg. Co.

Forced Draft Blowers *Fog Eliminators*

358 West 13th Street, New York

VALUATIONS

WE have made appraisals of properties for owners and bankers to be used as a basis for:—

Purchase and Sale
Financing
Local Assessment
Federal Taxes
Insurance
Accounting
Legal Proceedings
Awards for Damages

We are fully equipped to carry on this work.

CHAS. T. MAIN
ENGINEER

Industrial Buildings
Textile Mills
Steam Plants

200 Devonshire St.
BOSTON, MASS.
and
F. & M. Bank Building
Fort Worth, Texas

Hydro Electric Plants
Reports and Investigations

PAULSON, LINKROUM & CO.
INC.

COTTON YARNS

WEAVING AND KNITTING

Sole Agents
STANDARD COTTON MILLS
CEDARTOWN, GA.

Highest Quality Mule Spun Yarns
6s to 24s

52 LEONARD ST., NEW YORK

PHILADELPHIA
PROVIDENCE

CHICAGO
CHARLOTTE, N. C.

COTTON YARNS
for Particular Purposes
SPUN BY
The Arrow Mills, Inc.

This plant runs largely on cotton yarns required for special usage in our customers' mills—not the ordinary run of yarn but a fine combed and super carded product, spun of choice long staple white cotton in sizes ranging from 36s to 60s single and ply.

Quotations and samples promptly submitted

H. A. FLORSHEIM, *General Sales Mgr.*
225 Fifth Avenue New York, N. Y.

Also exclusively representing

GRAY MFG. CO.
FLINT MANUFACTURING CO.
ARLINGTON COTTON MILLS.
PARKDALE MILLS, INC.
ARROW MILLS, INC.
ARKRAY MILLS, INC.

Identified With the Mercerization of Cotton Yarns Since 1895
SINGLE

Plaiting Yarns
Exceptional Quality

FORREST MERCERIZING CO.
GLOUCESTER, N.J.

Splicing Yarns
Remarkable Strength

Reg. U. S. Pat. Off.

FORREST MERCERIZING CO.

Sole Agents
FORREST BROTHERS
119 S. 4th St., Forrest Bldg., Phila.

GLOUCESTER, N.J.

Johnston Mills Co.

"Direct to Consumer"

Cotton Yarns

JOHNSTON YARNS — including SPINNERS PROCESSING COMPANY'S warp mercerized, gassed, bleached and dyed yarns — are sold upon an actual — not implied — guarantee that they are commercially correct for knitting and weaving into fabrics of the better kind

The vigilant service of this Institution, beginning with the selection of the Cotton extends down through the most minute details of manufacturing and distribution of these products to the ultimate goal of Consumer Satisfaction.

SALES OFFICES:
NEW YORK: 93 Worth St. PHILADELPHIA: 308 Chestnut St.
CHATTANOOGA: 805 James Bldg. CHARLOTTE: Johnston Bldg.
BOSTON: 88 Broad St.

COTTON AND WOOL
MIXED YARNS

MERINOS

WOOL PERCENTAGES UP TO 25%

Yarns of Special Interest to Hosiery and Underwear Manufacturers

THOMAS HENRY & SONS INC.
P. O. STA. E PHILADELPHIA, PA.

COTTON YARN MARKETS

Good Business Done at Lower Prices

Strength of Cotton Early This Week Helps Volume of Buying of Carded Yarns

NEW YORK.—Good business at the lower prices is reported by yarn dealers in this market. The upward movement of cotton on Monday and Wednesday undoubtedly helped to increase the volume of transactions, resulting in the closing of a number of deals which were previously in the haggling stage. There is some sentiment to the effect that the raw material has about touched the low point, but these predictions are not made too positively in view of the way previous judgments on this subject have been reversed during recent months.

Prices on many carded numbers were off at mid-week another ¼c to 1c, as compared with quotations generally accepted as the market at the middle of last week. It is more than probable that further downward readjustment of prices will come unless cotton reacts upward more than it may reasonably be expected to, but on the other hand some of the numbers which are very scarce for nearby have held their ground remarkably well.

Dealers talk about spinners "having their backs up" on certain numbers, of which 40s-2 are an example. Lower prices on these counts are improbable for the immediate future because of the reduced production as a result of the drought, and the well sold position of most spinners.

Knitting Yarns Low—and High

Knitting yarns, as a class, have responded to the drop in cotton more quickly than have weaving counts, undoubtedly because of the fact that they have not been given the same support from the drouth situation. Yet it is declared that in this division of the market coarse counts, say up to 20s, of better grade are very difficult to obtain before Jan. 1.

The story is told by an underwear man, a large purchaser of yarns, that he has found no spinners of desirable quality 10s who were willing to sell them for less than 36½c, notwithstanding reports of quotations as low as 34½c on poorer qualities.

Coarse count combed numbers have eased off about 1c and certain numbers of mercerized yarns are quoted at 2 to 3c under last week's prices. This division of the market will unquestionably be slow in reflecting the full effect of the decline in cotton because of the excellent position of many mercerizers and combed yarn spinners.

A good idea of the current market situation on many counts may be ob-

(Continued on page 125)

Cotton Yarn Quotations

(Corrected at close of business Nov. 4)
Spot Cotton, Nov. 4—1925—20.45c.; Nov. 5—1924—24.20c.

Carded—(Average Quality)

Single Skeins and Tubes—(Warp Twist)

4 to 8s	—	—35½	20s	—	—39
10s	—	—36	24s	—	—41
12s	—	—36½	26s	—	—42
14s	—	—37	30s	—	—45
16s	—	—38	40s	—	—55

Two-Ply Skeins and Tubes

8s-2	—	—35½	26s-2	43½	—44
10s-2	—	—36	30s-2	45½	—46
12s-2	—	—36½	36s-2	—	—54
14s-2	—	—37	40s-2	—	—55
16s-2	—	—38	40s-2 High breakage	58	—59
20s-2	—	—39	50s-2	—	—67
24s-2	—	—41½			

Single Warps

10s	—	—36½	24s	—	—41
12s	—	—37	26s	—	—42
14s	—	—37½	30s	—	—45
16s	—	—38	40s	—	—55
20s	—	—39			

Two-Ply Warps

8s-2	—	—36½	24s-2	43	—43½
10s-2	—	—37	26s-2	—	—44
12s-2	—	—37½	30s-2	46	—46½
14s-2	—	—38½	40s-2 ordinary	—	—55
16s-2	—	—39	50s-2	—	—68
20s-2	—	—40			

8s-3 and 4-ply skeins and tubes; tinged, 34c.; white, 35-36c.

Hosiery Cones (Frame Spun)

8s	—	—34	22s	—	—39
10s	34½	—35	22s (silver and Jaeger)	41	—42
12s	35	—35½	24s	—	—40
14s	35½	—36	26s	—	—41
16s	—	—36½	30s tying in	41	—42
18s	—	—37	30s extra quality	43	—45
20s	—	—38	40s	—	—56

Combed Peeler—(Average Quality)

Warps, Skeins and Cones

20s-2	55	—57	50s-2	80	—82½
30s-2	60	—62	60s-2	90	—95
36s-2	66	—68	70s-2	1 00	—1 05
40s-2	70	—72	80s-2	117½	—1 20

Singles

12s	44	—45	30s	55	—57
14s	45	—46	38s	67	—68
16s	46	—47	40s	70	—72
18s	47	—48	50s	82	—85
20s	48	—49	60s	90	—92
24s	50	—51	70s	97½	—1 00
28s	52	—53	80s	1 15	—1 20

Mercerized Cones—(Combed, Ungassed)

26s-2	74	—76	50s-2	94	—97
30s-2	76	—78	60s-2	1 02	—1 08
36s-2	81	—83	70s-2	1 15	—1 23
40s-2	86	—88	80s-2	1 30	—1 38
45s-2	90	—92			

Peeler—(Super Quality)

Single Cones

	Carded		Combed			Carded		Combed	
10s	—	—40	49	—51	26s	—	—45	56	—58
14s	—	—41	50	—52	30s	—	—48	58	—60
16s	—	—41½	51	—53	36s	—	—54	66	—70
18s	—	—42	52	—54	40s	58	—60	72	—78
20s	—	—42½	53	—55	50s	—	—	82	—88
24s	—	—44	55	—57	60s	—	—	92	—98

Combed Cones, Warps and Tubes

20s-2	63	—65	40s-2	75	—80
24s-2	65	—67	50s-2	85	—90
28s-2	66	—68	60s-2	95	—1 00
30s-2	67	—69	70s-2	1 05	—1 15
3 s-2	73	—75	80s-2	1 25	—1 35

Combed Reverse Twist Thread Yarns—Skeins, Tubes or Cones
2, 3, and 4-ply

	Peeler Average		Peeler Best		Sakelarides Average		Sakelarides Best
24s	71	—	—	—77	Nominal	....	Nominal
30s	73	—	—	—80	Nominal	....	Nominal
36s	75	—	—	—85	Nominal	....	Nominal
40s	80	—	—	—90	Nominal	....	Nominal
45s	85	—	—	—95	Nominal	....	Nominal
50s	90	—	1 02	—1 00	Nominal	....	Nominal
60s	1 00	—	—	—1 10	Nominal	....	Nominal
100s	—	—			....	....	2 00—2 70

Knitters Buying Further Ahead

Contracts Placed for Delivery During First Half of Next Year—Combed Firm

PHILADELPHIA.—Although prices of carded qualities have become easier there has been a good volume of business placed by weavers and knitters this week. The decline in knitting yarn quotations has been more extensive than in weaving and there have been larger inquiries on the former than heretofore, manufacturers offering to buy into the middle of next year in several instances, offering 33½c basis 10s average quality. While spinners and dealers are willing to sell for less than a week ago they have as yet been unwilling to meet this idea of price and are holding for 34½c to 35c basis 10s at which a fair volume of orders has been taken. Knitters are not only inquiring for larger amounts but are willing to buy further ahead than for many months. Sales of this character are usually made at a cent or more under prices dealers are willing to sell nearby delivery orders. Combed and mercerized are strong, especially in finer counts.

Knitters More Active

Knitters are disposed to buy further ahead than weavers, a majority of dealers reporting a larger volume of business from the former than from weaving mills. Lack of large supplies of stock yarns is having a tendency to make manufacturers place larger contracts than they would have ordinarily if they had been able to continue to buy from week to week as required. In addition to this, buyers, in many instances, have taken advantage of the drastic decline in cotton to place business, feeling that prices are low at this time and it is advisable to place at least a portion of their yarn requirements. Reports from the dry sections in the South are more favorable than for several weeks, more than an inch and a half of rain falling in the affected districts recently which has aided the power companies to a certain extent, permitting spinners there to operate three and a half days a week instead of three days. Farther west, around the delta section heavier rains have occurred, which have been heavy enough to damage the growing crop.

Quotations Lower

Sales of carded knitting yarns have been made in good volume, several contracts covering manufacturers' needs for first six months of next year. Prices have averaged 34½c to 35c for 10s with contracts calling for 18s, 20s, 24s, 26s and 30s in most in-

ABERFOYLE MANUFACTURING COMPANY

MERCERIZED YARNS

MAIN OFFICE
Bankers Trust Building
PHILADELPHIA

James Building
CHATTANOOGA, TENN.

READING, PA.

Adams-Franklin Building
CHICAGO

Westaway Building
HAMILTON, CANADA

MILLS
CHESTER, PA.

Cotton Yarn Markets—Continued

MANCHESTER YARN CABLE

Manchester, Eng., Nov. 4 (Special Cable to TEXTILE WORLD).—Cotton yarns are irregular. Many cloth manufacturers are reported to be going short on their yarn requirements.

stances. One dealer closed several contracts of 100,000 lbs. of this variety. For a better grade manufacturers have paid 43c for 30s and other counts in proportion, being a cent lower than last week and due to the drop in cotton. There has been a fair demand for single combed for knitting although large orders are only possible where exceptionally low figures are quoted, one of the largest sellers of these yarns stating that in their experience buyers refused to pay more than 45c for 18s in large amounts or 46c, for smaller quantities. While stocks of this yarn have been used there has been as yet no improvement in quotations.

Power Situation Improves

Spinners refuse to consider less than 41c to 42c for 20s-2 and 47c to 48c for 30s-2 warps, several refusing to quote any price whatever early in the week when cotton became firmer while manufacturers state they are being offered average quality yarn on the basis of 39½c for 20s-2 and 45c for 30s-2. These lower prices, however, are usually for deliveries after the first of the year when spinners feel the curtailment because of lack of rains will have passed and when larger stocks of these counts have been accumulated. When a manufacturer needs stock yarn in these numbers he is compelled to pay at least a cent higher than if he is in the market for deliveries after January. The lower prices mentioned also represent average grades as better yarn such as required by plush or tape mills, is considerably higher, 30s warps used by the tape trade being quoted at 49c to 50c or three cents above that asked for ordinary grades.

Two-ply combed qualities both for mercerizing and weaving, although less steady in coarse counts than in finer numbers, continue strong. Prices have not changed during the week, the trend, however, being toward higher prices rather than to a lower level. Sales of 40,000 lbs. 40s-2 warp twist at 72½c, 10,000 lbs. of 70s-2 on cones at $1.02 and 60s-2 at 92½c were reported this week. Spinners, in most cases, are well sold ahead on the basis of full time operations until the latter part of January. While middling cotton has declined three or more cents no reductions have been made in long staple, the differential rising as the base price declined, so that spinners are no better off than before the drop so far as long cotton is concerned. Mercerizers, in several instances, state they are receiving more inquiries than they can deliver on the basis of the amount of gray yarns coming to them from southern combed spinners.

Unsettled Situation

Hand-to-Mouth Buying — Prices Largely Nominal

BOSTON.—The very fact that yarn merchants are finding it difficult to bring buyers and sellers together on a practicable price basis demonstrates that there is no large demand of an urgent character and much resistance to depressive influences by spinners. This is not strange in view of the large volume of business that was booked during October, and that has left the majority of yarn users well covered for the balance of the year and the majority of spinners in a comfortable position for the same period; in fact, the rather numerous inquiries for small lots of yarn for prompt delivery would seem to indicate that buyers are not as well covered as spinners, particularly spinners in the drought district of the South who are still operating on a curtailed basis.

On medium and coarse count carded yarns, and particularly on hosiery yarns, there is a tendency to eliminate the price premiums that have been ruling for prompt deliveries, and this would seem to indicate that many spinners in the South are finding ways of increasing production despite curtailed hydro-electric power. Nearly all medium and coarse count carded yarns have declined ½ to 1c, but there is a suspicion that most of the very low quotations reported represent short sales for January and later delivery. While prices are largely nominal it is possible to buy carded weaving yarns on a basis of 39½c for 20s-2 ply warps for prompt delivery and at 39c for January and later delivery; the minimum on 30s-2 ply warps of good grade for prompt delivery is 45c, but this may be shaded ½ to 1c for January and later delivery. Finer counts than 30s are relatively firmer than the coarser counts and it is difficult to buy a 40s-2 ply warp of high break for either near or forward delivery for less than 55c although ordinary yarns are quoted as low as 52 to 53c for January and later delivery. For coarse count carded hosiery yarns 34½ to 35c is the bottom for prompt delivery and 34c for January and later delivery on the basis of 10s frame spun cones. Counts as fine as 30s are quoted on a proportionate basis and finer counts are relatively firmer. Very low prices are reported on 30s tying-in yarn for January and later delivery, but it is believed that anything less than 40c represents short selling. It should be noted that the large percentage of low grade cotton

GROVES MILLS, Inc.
SUPER QUALITY
COTTON YARNS
COMBED PEELER, 24s to 80s, single and plies
CONES, TUBES, SKEINS AND WARPS
Samples and quotations promptly furnished
SALES OFFICE—
225 FIFTH AVENUE, NEW YORK
MILLS AT GASTONIA, N. C.

VAN COURT CARWITHEN
300 Chestnut Street, Philadelphia, Pa.
Sole Representative
SWIFT SPINNING MILLS
BRADLEY MFG. CO.
MUSCOGEE MFG. CO.
Whiten, Stock, Dyed and Heathers
Cotton Yarns of Quality
ALL of COLUMBUS, GA.
FROM MILL DIRECT TO CONSUMER

BURNS-PARR, Inc.
COTTON AND RAYON YARNS
Mariner & Merchant Bldg. PHILADELPHIA
United States Representatives
HARWOOD CASH & CO., LTD.
Fine Yarns for Curtains, Lovers, Voile, Etc.
Mossfield, England
Authorized U. S. Representative
HOLLANDSCHE KUNSTZIJDE INDUSTRIE
Breda, Holland

JAMES E. MITCHELL COMPANY
Cotton Yarns
Philadelphia Boston

FORREST BROTHERS
Forrest Bldg., 119 S. Fourth St., Phila., Pa.
Superior Quality Knitting Yarns
Sole Representatives
Bladenboro Cotton Mills—Vass Cotton Mills
8s to 30s Extra Carded

H.S.RICH & CO.
COTTON YARNS
100-106 SOUTH WATER ST.
PROVIDENCE, R.I.

SOUTHERN MERCERIZING CO.
TRYON, NORTH CAROLINA

Our Specialty—
SINGLE Mercerized

Yarn for Splicing
and Plaiting

Single Mercerized Yarns up to 100/1—Also Two Ply Mercerized 100/s to 140/s
Wire or write us for prices and samples

SOUTHERN MERCERIZING CO.
TRYON, NORTH CAROLINA

PHILADELPHIA OFFICE
Pfingst Bros.,
308 Chestnut St.

CHICAGO OFFICE
1114 Old Colony Life Bldg.,
George J. Loerzel, Manager

CHATTANOOGA, TENN., OFFICE
913 James Building
Southern Yarn Co., Representative

T.J. PORTER & SONS

FINE SINGLE YARNS
60s to 200s

COMBED SAKELARIDES
and SEA ISLAND
In Skeins or on Cops,
Tubes or Cones
Immediate Deliveries

119 SOUTH FOURTH STREET
PHILADELPHIA
BRANCH SALES OFFICES
NEW YORK LOS ANGELES

THE ELMORE COMPANY
MERCERIZED
YARNS
Spindale
N.C.

Single Yarns
MERCERIZED
Bleached and Dyed on Cones

Specializing in Fugitive Shades
for Plaiting and Splicing

THE ELMORE COMPANY
Spindale, N. C.

Selling Agents
Cotton Products Co.
Bankers Trust Bldg., Philadelphia

Cotton Yarn Markets—Continued

in the present crop is certain to result in the widening of the price range between low and high quality yarns of any given count, and this is undoubtedly responsible for some of the low prices now being quoted for January and later delivery on hosiery as well as weaving yarns.

Business in combed and fine count yarns is extremely slow, this being partially due to the fact that most users are fairly well covered for the immediate future and also to the fact that the relatively high price of staple cottons makes it impossible for spinners to quote materially lower prices than have ruled during the last few weeks.

Cotton Yarn Notes

J. E. Arters, formerly with Franklin D'Olier & Co., Inc., Philadelphia, is no longer connected with this concern. He has become associated with Mauney-Steel Co., 237 Chestnut St., Philadelphia, and will have charge of the sale of their knitting yarns. This is a new departure for this concern, that formerly specialized in weaving yarns.

* * *

H. A. Wein, for many years connected with the cotton yarn trade in Philadelphia, is now associated with the Riddle Co., Philadelphia, where he will assist in covering the local trade.

Cheaper Cotton Shown in Lancashire Index

MANCHESTER, ENG.—The extent of the recent fall in cotton prices is shown in the *Cotton Trade Review* (Manchester) index. The figure for the general average of raw cotton, yarn and cloth on Oct. 16 was 211, compared with 227 on Sept. 11, 253 on Dec. 31, 1924, and 235 on Oct. 17, 1924.

As a basis of the index, 100 is taken to represent the ruling price of each commodity on July 31, 1914. The largest decline on the month was 38 points in Egyptian cotton to 292. American cotton prices were lowered 22 points to 173, and American yarn at 195 is 15 points down. The fall in cloth was 9 points from 184 to 175. Egyptian yarn—now 222—is exceptionally 4 points higher.

PHILADELPHIA, PA. A charter has been granted to a company called Beeco Mfg. Co., which will manufacture silk hosiery and underwear. The organization of the concern has not yet been completed. It is reported they will manufacture both in this city and in the South, having sales offices in the St. Girard Bldg., Philadelphia. F. C. Brunhouse was the attorney in charge of incorporating this new company.

PHILADELPHIA, PA. J. S. J. McCutcheon, Master & York Sts., manufacturer of worsted fabrics, has recently installed additional looms.

Business News

Mossberg Pressed Steel Corp. Opens Greenville Office

The Mossberg Pressed Steel Corp., of Attleboro, Mass., has opened an office in Greenville, S. C., at 101 Augusta Street. The company will be represented by R. E. Johnson and Mr. Osteen, who will be in charge of this office. Both men have had wide experience in textile manufacture, particularly with reference to the use of pressed steel devices of the sort manufactured by the Mossberg Pressed Steel Corp., including beamheads, beams, spools, reels, braider carriers, drop wires, etc.

Mr. Johnson and Mr. Osteen will call on the trade in the southern territory, particularly in North and South Carolina and Georgia.

Sullivan Machinery Co. Office Changes

The Cleveland office of the Sullivan Machinery Co., hitherto at Room 701, Rockefeller Bldg., has moved to Room 1506 in the same building in order to secure needed additional space. R. T. Stone is manager.

In order to secure larger space, the company has moved its office in Sydney, New South Wales, R. D. Willets, manager, from Australasia Chambers, 3 Martin Place, where it has been for the past 15 years, to Kembla Building, Margaret Street.

Sykes Plans Card Clothing Plant in South

CHARLOTTE, N. C.—Joseph Sykes Bros., manufacturers of card clothing, with plant at Lindley, Huddersfield, England, have commissioned Lockwood, Greene & Co., engineers, Charlotte, to render complete engineering services on a new office and manufacturing building to be erected in Charlotte. The company has had offices in that city for several years, in the Observer Building.

Promoted to Superintendent

Charles P. Vaill, assistant superintendent of the South Works of the American Steel & Wire Co., Worcester, Mass., has been promoted as superintendent of the Trenton, (N. J.) Works of the company. He has been succeeded by Clifford F. Hood, superintendent of the electric cable department at the same works while James J. Morrison, a foreman takes Mr. Hood's former place.

Four More 40-Year Men

William J. Foster, foreman of the chuck department; John A. Wood, foreman of the spooling department; George L. Gill, foreman of the roll department, and Edward McGuire of the spinning erecting department have been added to the list of 40-year service men by the Whitin Machine Works, Whitinsville, Mass.

Agency for Sipp Machine Co.

G. G. Slaughter, Johnston Building, Charlotte, N. C., has taken over the agency for the Sipp Machine Co., of Paterson, N. J., in the southern states.

CANNON YARNS

Direct Selling

When we quote prices, we also name the particular mill with whom the contract is to be placed. You know exactly what you are buying—and as we sell the product of our own mills, we can guarantee to our customers the fulfillment of each contract, both as to Quality and Delivery.

Our Direct Selling is your Insurance.

CANNON MILLS
INC.
PHILADELPHIA

New York Providence Boston
Reading, Pa. Chicago Utica, N. Y.
Chattanooga

THE STANDARD OF VALUE & QUALITY

COTTON PRODUCTS COMPANY

Bankers Trust Building Philadelphia, Pa.

High Grade Warps for MERCERIZING

Selling Agents for

The ELMORE COMPANY, Spindale, N. C.

SINGLE MERCERIZED YARNS

McCONNEL & CO., Ltd.

MANCHESTER, ENGLAND

Spinners and Doublers of Fine Cotton Yarns especially adapted for the making of Laces, Voile, Fine Hosiery, Dress Goods and for insulating wires. : : : : : : : :

REPRESENTATIVE FOR U. S.

(Except New England States)

F. C. CHAMBERS

3750 L Street, Philadelphia, Pa.

REPRESENTATIVE FOR NEW ENGLAND STATES

(Massachusetts, Connecticut, Rhode Island, New Hampshire, Maine and Vermont)

NORMAN C. NAGLE

80 Boylston Street, Boston, Mass.

CATLIN & COMPANY, Inc.

COTTON YARNS

SOLE AGENTS FOR

LAWTON SPINNING COMPANY

TREMONT and SUFFOLK MILLS

and other mills furnishing full range of all numbers

NEW YORK BOSTON PHILADELPHIA CHICAGO

DURHAM SPINNING MILLS HOLLAND & WEBB, Ltd.

J. BLACKWOOD CAMERON

American Casualty Bldg. Reading, Pa.

COTTON YARNS

Combed *Carded* *Mercerized*

Representatives

Philadelphia
CAMERON & PFINGST
308 Chestnut St.

Chattanooga
R. D. McDONALD
James Bldg.

Statesville, N. C.
D. F. WALLACE
Jenkins Bldg.

T. MAXWELL MERYWEATHER

COTTON YARNS AND RAYON

Drexel Bldg. PHILADELPHIA

Cotton Yarn Markets—Continued

N. Y. Cotton Yarn Market

(*Continued from page* 119)

tained from the fact that an insulator is reported to have paid 38c this week for 12s single warps, notwithstanding the fact that this number is quoted at 37c. and possibly less, for future delivery.

Whether or not yarns are a good buy at present prices for delivery next year is a matter entirely for individual decision. There are opinions both ways in the selling market, but few are rash enough to take a firm position on this matter, without qualifying it in some way.

OBITUARY

James C. Potter

James C. Potter, one of the leading residents of Pawtucket, R. I., president and director of the Potter Fine Spinners, Inc., director of the Alvista Cotton Mills and Pilgrim Mills and vice president and director of the Potter & Johnston Machine Co., died at Bournemouth, England, Oct. 30, according to cable advices to his offices.

He has been a resident of Pawtucket since 1887 and had given to many philanthropies. He gave the Potter Rest Home in Slater Park and the Potter schoolhouse to the city. He was a director of the Industrial Trust Co. and the Rhode Island Hospital Trust. He was an inventor of prominence with more than a hundred important inventions to his credit. He was active in Masonry, was a 32d degree Mason, and a former chairman of the Pawtucket Park Commissioners, and was a member of the Pawtucket Business Men's Association.

Mr. Potter was born in Scotland and graduated from the Mechanics' Institute at Glasgow. He was for a time with the Vale Line Steamship Co. and the Clyde Engineering Works in Glasgow. His father having emigrated to the United States and founded a machine works, the son soon followed and took charge of the father's business.

He later became senior partner of the firm of Potter & Atherton Machine Co., manufacturers of cotton picker room machinery which was later taken over by the Kitson Machine Shop. During his connection with this firm and later with the Potter & Johnston Machine Co., whose principal product was and is automatic machine tools, he was the inventor of many important improvements in cotton opening machinery. His inventions were largely responsible for the success of the Potter & Johnston Machine Co., their automatic machine tools having been shipped all over the world and largely used by the Allies during the world war. A large addition to the plant was utilized for munitions production. With the close of the latter at the end of the war, Mr. Potter organized the Potter Fine Spinners, Inc., to give employment to many of his former help who were out of work, and the spinning frames installed in this plant are of Mr. Potter's invention and differ from the ordinary ring frame in that the ring rail is stationary and the spindle rail rises and falls. Mr. Potter was 70 years old and is survived by his widow and five children.

He leaves a widow Mrs. Charlotte Holland Potter, formerly of Baltimore and five children, William W., Mrs. Jack Wyper, Mrs. C. P. Hanney of Liverpool, Mrs. Chester T. Shaw and Mrs. Ralph Lumb of Pawtucket.

Lower Waste Market

Cotton Below 20c Brings Waste to a Standstill

BOSTON.—Cotton wastes are all lower this week. The market is following very closely the movement of the staple and until spot develops more steadiness movement in cotton wastes, in the line of new business, will be if not entirely negligible at least very unsatisfactory both as to volume and prices paid by purchasers. The depreciation in value on total stocks held by members of the Exchange since the publication of the report must amount in the aggregate to a considerable sum; but the loss at the moment is on paper.

The market has been practically at a standstill since the issuing of the last Government report. No large amount of confidence is shown as to the accuracy of the estimate. While some traders think the estimate is far too high, those in closer touch with southern sentiment are inclined to believe that even at 15,226,000 bales the crop is still underestimated.

Now that cotton is to establish itself on a level more agreeable to the views of manufacturing interests, larger production of waste will occur and will come into the market on lower prices. Contracts for 1926 will be made on a safe basis and although the market has been and is still very unsettled, the excitement will soon subside and there will be a gradual, steady movement toward much more satisfactory merchandising conditions.

There have been no imports of manila kapok in this market recently but the material is quoted 32c to arrive. An import of 99 bales of kapok via steamship Urbino from Calcutta arrived here recently. Imports of kapok into the United States for September amounted to 832 tons bringing total imports for year to date to 6,997,000 tons as compared with 6,531,000 tons similar period last year, an increase of 7%.

Current Quotations

Peeler comber	18 —18½c.
Peeler strips	17 —17½c.
Egyptian comber	17 —17½c.
Choice willowed fly	10½—11c.
Choice willowed picker	7½— 8c.
Sak. strips	21 —22c.
Linters (mill run)	6 — 6½c.
Spoolers (single)	15 —15½c.
Fine white cop	16 —16½c.

J. B. JAMIESON COMPANY
COTTON YARNS
77 SUMMER ST. BOSTON, MASS.

Experience linked with Service — Insure your entire satisfaction
Weaving—COTTON YARNS—Knitting
Sold by
"Industrial"
are Good Yarns
INDUSTRIAL YARN CORPORATION
88 LEONARD STREET, NEW YORK

GATE CITY COTTON MILLS
Manufacturers of
Superior Quality
WHITE KNITTING YARN on CONES
We sell direct to Knitters and guarantee satisfaction
217 Trust Co. of Georgia Bldg., ATLANTA, GA.

COTTON HAROLD W. O'LEARY COMPANY YARNS
52 Chauncy Street, Boston, Mass.

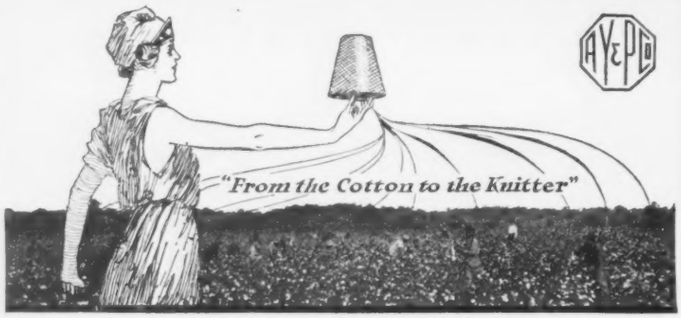
TILLINGHAST-STILES CO.
JESSE P. EDDY, Treas.
Cotton and Worsted Yarns
PROVIDENCE, R. I.
Room 922, Webster Bldg. 327 So. La Salle St., Chicago

ORSWELL MILLS Fitchburg, Mass.
COTTON YARNS
Carded and Combed—Gassed and Ungassed

THE JOHN F. TRAINOR COMPANY
COTTON YARNS
National City Building
17 East 42nd Street,
New York
Telephone—Murray Hill 0614-0615

JOHN F. STREET & CO.
COTTON YARNS
201 Industrial Trust Bldg., PROVIDENCE, R. I.
CHICAGO PHILADELPHIA NEW YORK

EWING-THOMAS CONVERTING CO.
Specialists in Mercerized Yarns CHESTER, PA.
Warp Mercerizing for the Trade
Gassed—Natural—Bleached—Colors
DOUBLE MERCERIZED SPECIAL PROCESS



AMERICAN YARN & PROCESSING CO.

General Office:
Mount Holly, N. C.

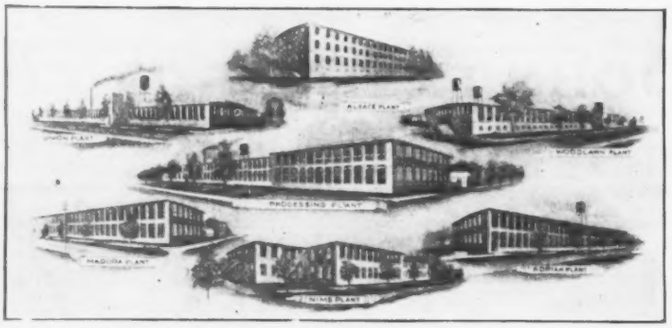
Spinners and Mercerizers

of

High Grade Combed and Carded Yarns

Our Mercerized Yarns are the Product of Our Own Mills

Sales Representatives
H. B. ROBIE
346 Broadway, New York City
PLOWMAN YARN CO.
1049 Drexel Bldg., Philadelphia
R. D. McDONALD
924 James Bldg., Chattanooga, Tenn.
HAROLD W. O'LEARY COMPANY
52 Chauncy St., Boston, Mass.
G. J. LOERZEL
166 W. Jackson Blvd., Chicago, Ill.
THOS. S. TULEY
1318 McHenry St., Louisville, Ky.
G. C. ELLIS
Fairleigh Crescent, Hamilton, Ont., Canada



The Halliwell Company

Dyers, Bleachers and Mercerizers of Cotton Yarns in Warps or Skeins

High Class Mercerizing in Warps Only — Fast Colors A Specialty

A new plant, latest and most modern machinery and equipment, backed by forty years of specialized experience, guarantees service and satisfaction.

The Halliwell Company
PAWTUCKET, RHODE ISLAND

O. S. HAWES & BRO.
FALL RIVER, MASS.
COTTON YARNS ALL FORMS AND NUMBERS

MONUMENT MILLS, Housatonic, Mass.
HIGH GRADE COTTON YARNS White, Colors, Bleached
On Beams, Jack Spools, Cones, Skeins and Chain Warps
FAST-BLACKS & COLORS { For Woolen Mills a Specialty } WE SELL DIRECT

THE J. R. MONTGOMERY CO. WINDSOR LOCKS, CONN.
Manufacturers of
MERCERIZED COTTON YARNS Give the high Silk-like lustre
In Knit Goods and Woven Fabrics
NOVELTY YARNS Poucle, Bourette and Spirals in Cotton Wool, Worsted, Mohair and Silk.
COTTON WARPS On Beams, Jacks, Spools and Tubes In Fancy Twist, Colors and Printed

COTTON YARNS PLUS SERVICE
ANY COUNT OR VARIETY EASTERN OR SOUTHERN GREY OR PROCESSED
Advice Based on Our Experience of Thirty Years in Bleaching, Dyeing, Mercerizing, Etc., at Your Service
E. J. McCaughey, 51 Arlington St., Pawtucket, R. I.

SOLWAY DYEING & TEXTILE CO.
PAWTUCKET, R. I.
Dyers, Bleachers and Mercerizers of Cotton Yarns, Warps or Skeins
ABSOLUTELY FAST COLORS

THE UNIVERSAL MERCERIZING CO.
INCORPORATED
SKEIN YARN MERCERIZING
164 LIBERTY AVE. NORTH BERGEN, N. J.
Phone: UNION 6001

WM. WHITAKER & SONS
Olney, Philadelphia
COTTON CARDING and CARDED COTTON
Roving, Shuttle Cops, etc.

COTTON WARPS
DANA WARP MILLS Westbrook, Maine
Cotton Yarn and Warps, Carded and Combed
WHITE and COLORED SINGLE and PLY SELL DIRECT

COTTON MARKETS

Cotton Turns Steady At 18-Cent Level

Heavy Hedge Selling Followed by Pre-Bureau Covering—Government Report on Monday

The decline started by the last Government crop report continued until the price of January contracts approached the 18c level. They sold at 18.11 last Saturday, representing a decline of approximately 8c a pound from the high price of last summer. At this figure the decline was checked by covering, which was promoted not only by a natural disposition to take profits on recent sales, but by uncertainty as to the probable showing of next Monday's Government report, and perhaps, by an impression that at 18c in the New York market, cotton might be rapidly approaching an investment basis. The buying on rallies of a little over a cent a pound was attributed chiefly to covering, however, and bearish sentiment remained more or less in evidence toward the end of the week.

Hedge selling was active on the decline below the 19c level and there seemed to be a feeling that cotton which had been bought at fixed prices earlier in the season was being hedged as a protection against further possible declines. Mills were reported to be selling hedges, while there was an impression that cotton on which advances had been secured in the South, was also being hedged on the decline. The pressure of this sort seemed to subside after the break of last Saturday, and as soon as the pressure tapered off, the market showed the natural tendency to rebound from its previous weakness. It is doubtful, perhaps, whether this rebound reflected any material change of sentiment. The disposition to take profits on short contracts, however, was increased by a feeling that the last Government's report might prove the maximum view of the crop for the season; that the market has been adjusted to estimates of 15 million bales or over, and that it is a question whether recent unfavorable weather had not reduced the size of the crop in Oklahoma, Arkansas and parts of west Texas, as well as causing much damage to the grade. Assuming that the official indication as of Oct. 18 gave an accurate account of prospects as they then existed, some thought next Monday's figures were more likely to show a falling off than a further increase in the yield. Moreover, there are some traders who believe that even if 15 million bales or more cotton has been grown, it may not be all picked and that in any event, its spinning value has been so reduced that in effect it will represent little more than 14¾ million bales in an ordinary season.

In addition to figures on the indicated yield, Monday's Government statement is expected to include certain observations as to the grade of the crop, but no definite figures as to the proportion of tenderable and untenderable qualities are expected. The steady widening of differences between high and low grades in the spot markets would certainly suggest an unusually large proportion of the latter.

The following table will show Wednesday's closing quotations in the leading spot markets of the country, with the usual comparisons:

Market	Oct. 28	Nov. 4	Ch'ge	Last year	Sales
New Orleans	19.50	19.34	—.16	23.05	29,299
Mobile	19.40	19.10	—.30	22.75	623
Savannah	19.32	19.20	—.12	23.25	6,849
Norfolk	19.50	19.38	—.12	23.13	5,667
New York	20.60	20.45	—.15	23.90	.....
Augusta	19.31	19.19	—.12	23.00	4,596
Memphis	20.00	19.25	—.75	22.75	13,815
St. Louis	20.00	19.50	—.50	22.75	.....
Houston	19.95	19.80	—.15	23.20	39,736
Dallas	19.75	19.55	—.20	22.30	55,904

The following differences on and off middlings are given as compiled from the reports received by the New York Cotton Exchange. The cotton grades marked ** are not delivered on contract:

	Dallas	Memphis	Montgomery	Augusta	Average
WHITE GRADES					
M. E.	1.50†	2.00†	1.13†	1.25†	1.30†
S. G. M.	1.25†	1.50†	.88†	1.00†	1.02†
G. M.	1.00†	1.00†	.63†	.75†	.77†
S. M.	.75†	.50†	.38†	.50†	.51†
S. L. M.	1.25*	1.00*	1.00*	1.00*	1.03*
L. M.	2.50*	2.50*	2.25*	2.25*	2.26*
S. G. O.**	4.00*	4.00*	3.50*	3.25*	3.56*
G. O.**	5.25*	5.00*	4.75*	4.25*	4.74*
YELLOW TINGED					
G. M.	.50*	.50*	.25*	.25*	.30*
S. M.	.75*	.75*	.75*	.75*	.70*
M.**	1.75*	1.00*	1.50*	1.50*	1.55*
S. L. M.**	3.00*	2.50*	2.50*	2.50*	2.64*
L. M.**	4.00*	4.00*	3.50*	3.75*	3.83*
YELLOW STAINED					
G. M.	2.25*	1.50*	1.50*	1.50*	1.72*
S. M.**	2.50*	1.75*	2.00*	2.00*	2.18*
M.**	3.25*	2.00*	2.75*	3.00*	2.85*
BLUE STAINED					
G. M.**	2.00*	2.50*	1.38*	1.38*	1.78*
S. M.**	2.50*	2.75*	1.88*	1.50*	2.26*
M.**	3.25*	3.00*	2.75*	2.50*	3.00*

Cotton Statistical Data

(Fluctuations of Futures, N. Y.)

	Closed Oct. 29	For Week High	Low	Closed Nov. 4	Chge.
Nov.	19.52	19.74	18.06	19.74	+ .22
Dec.	19.72	20.02	18.75	19.94	+ .22
Jan.	19.13	19.45	18.11	19.35	+ .22
Feb.	19.30	19.30	18.35	19.47	+ .17
March	19.38	19.67	18.34	19.58	+ .20
April	19.44	19.64	18.56	19.64	+ .20
May	19.50	19.80	18.50	19.70	+ .20
June	19.35	19.65	18.68	19.65	+ .30
July	19.17	19.51	18.12	19.20	+ .03
Aug.	19.15	19.20	18.50	19.20	+ .05
Sept.	19.15	19.18	18.19	19.18	+ .03
Oct.	.....	.....	18.50	19.12	.....

Spot Fluctuations for Week

(Middling)

	N York	N Orleans	L'pool
Fri., Oct. 30	19.75c.	18.47c.	10.35d.
Sat., Oct. 31	19.40c.	18.05c.	10.15d.
Mon., Nov. 2	19.9⁰c.	18.70c.	9.93d.
Tues., Nov. 3	Holiday	.....	.....
Wed., Nov. 4	20.45c.	19.34c.	10.30d.
Thurs., Nov. 5	21.00c.	19.82c.	10.44d.

Spot Fluctuations and Stocks

	Prices Nov. 4	Stocks This Week	Last Year
Galveston	19.80	431,889	459,009
New Orleans	19.34	413,861	288,442
Mobile	19.1⁰	27,150	9,013
Savannah	19.20	143,047	64,842
Charleston	.....	51,462	41,900
Wilmington	.....	37,316	20,577
Norfolk	19.38	123,887	49,649
Baltimore	19.50	775	1,668
Augusta	19.19	105,974	46,223
Memphis	19.25	153,896	122,180
St. Louis	19.50	1,388	1,628
Houston	19.80	578,329	518,036
Little Rock	19.88	42,663	44,558

What You Buy

The man who specifies Quissett Quality Yarns is assured—

1—*That he is getting yarns made from high grade, carefully selected early bloom cotton.*

2—*That it is made by experts whose entire lives have been spent in the textile industry.*

3—*That the yarn will work smoothly on loom or knitting machine with a low percentage of breakage.*

4—*That fabric made of this yarn will be a credit to the house.*

5—*That the yarn will always be of the same high grade, whether the order be the first or the fiftieth.*

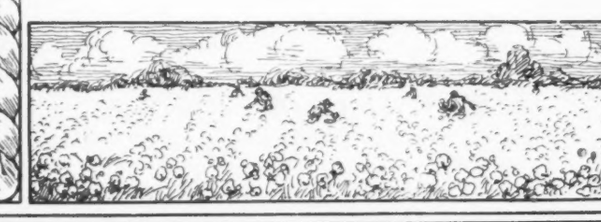
Carded and Combed Cotton Yarns in all Numbers and Descriptions.
Ply Yarns our Specialty.
Egyptians, Sea Island, Peelers, Sakellarides, Pimas and Peruvians.

Quissett Mill

New Bedford, Mass.

Wm. M. Butler, Pres.
Edward H. Cook, Treas.
Thomas F. Glennon, Agent

QUISSETT MEANS QUALITY



Worcester Bleach & Dye Works Co.

ESTABLISHED 1861 WORCESTER, MASS.

BLEACHERS, DYERS AND MERCERIZERS OF COTTON YARNS AND WARPS

Winding on Cops, Tubes or Cones

Manufacturers of Cotton Yarns in Fast Colors—Also Glazed Yarns

"Sewing and Stitching Threads for All Industries"

RAYON DYEING AND WINDING

THE DANA S. COURTNEY COMPANY

Chicopee, Mass.

Manufacturers of a Complete Line of

Bobbins, Spools and Skewers

for Cotton, Woolen and Jute Mills

Warp and Filling Bobbins a Specialty

Send Us a Sample of Your Requirements

Southern Agent—A. B. Carter, Gastonia, N. C.

FRIEDBERGER - AARON MFG. CO.

Recognized as the Leading Manufacturers of

BRAIDS, EDGINGS, TUBING

for trimming knit underwear

MILLS: WAYNE JUNCTION, PHILA.

Post Office Address: Logan Station, Philadelphia

Mossberg Pressed Steel Corporation

Patent June 7, 1921 Section Beam Head

ALL STEEL

- LOOM BEAM HEADS
- SECTION BEAM HEADS
- ADJUSTABLE BEAM HEADS (SPLIT AND SOLID)
- NARROW FABRIC BEAMS
- BEAMS FOR ELASTIC AND NON ELASTIC WEB
- BEAMS FOR SILK RIBBON
- "NEW PROCESS" DROP WIRES
- JACK SPOOLS

Attleboro, Mass.

Southern Office: 101 Augusta St., Greenville, S. C.

—Write to—

us for samples and prices of sewing, seaming and splicing threads for hosiery and underwear manufacturers. Accurate color matching. Prompt deliveries.

—Florence—

Thread Company

Florence, N. J.

STEVENS YARN CO., Inc.

86-88 Worth St. N. Y. City

COTTON YARNS

Selling Agents for

- LILY MILL & POWER CO. Combed Rev. Thread 26s to 50s
- MASON COTTON MILLS CO. Combed & Carded 20s to 40s
- RHYNE-HOUSER MFG. CO. Combed 50s to 60s
- STEELE COTTON MILL CO. Carded 26s to 30s
- STAR THREAD MILLS Carded 24s
- PRINCETON MFG. CO. Carded 20s
- GEORGIA MFG. CO. Carded 24s to 30s
- ROYALL COTTON MILLS Carded 20s

BOSTON PHILADELPHIA
PROVIDENCE CHARLOTTE, N. C.

PHILA. COTTON YARN CO.

COMBED CARDED YARNS KNITTING WEAVING

135 S. 2nd St., Philadelphia

WEIMAR BROTHERS

Manufacturers of

TAPES, BINDINGS AND NARROW FABRICS

2046-48 Amber Street, Philadelphia

COTTON YARN SHIPMENTS TO PHILADELPHIA, PA.

Shipments consigned to our care are carefully and promptly handled upon arrival by our large fleet of Auto Trucks and Teams with experienced employees. Representatives at all Terminal Stations and Wharves daily. Cartage prices quoted upon inquiry.

PETER CAVANAUGH, Inc.

222 Chestnut St. Philadelphia, Pa.

Freight Forwarders, Transfer Agents and Bonded Draymen

Established 1873

AMTEX TRADE MARK REGISTERED

Spinning and Twisting Tapes and Double Loop Bands

AMERICAN TEXTILE BANDING CO., Inc., Germantown, Philadelphia

Dixon's Patent Reversible and Locking in Back Saddle with New Oiling Device, three Saddles in one, also Dixon's Patent Round Head Stirrup.

Send for samples to

DIXON LUBRICATING SADDLE CO.

Bristol, R. I.

CHAPMAN ELECTRIC NEUTRALIZERS

Remove Static Electricity from all Fabrics

Factory, Portland, Me.

M. S. PENNELL

General Sales Agent

127 Federal St.

Boston, Mass.

LINEN YARNS

Linen Threads and Jacquard Harness Twines

FLAX and FLAX NOILS

Ramie Noils

ANDREWS & COOK

66-72 Leonard St. New York

Cotton Markets—Continued

Southern Spots Upset

Bureau Reports and Weather Damage Worry Memphis

MEMPHIS, TENN., Nov. 2.—This cotton market has seldom been more upset, due to two causes, namely: the recent Government estimate on the crop, and to weather damage the crop in this territory has sustained. Buying of low grades is confined to investment purchases: there is practically no demand from any other source. Farmers are panicky and inclined to press sales, and some cotton has sold, in the country, as low as 10c a pound. Nobody seems to know the value of the low grades, and while there is quite general belief that they will be in demand later on, no one now wants to take hold except at prices far below intrinsic values compared with white cotton. Fair demand keeps up for white cotton of all descriptions and this demand is quite general, but the edge is off even the high grade staples. There were rumors during the week that mills were turning to the low grades, but these rumors lacked any sort of confirmation. Bankers are advising their customers to sit steady; to pick cotton remaining in the field, not to snap or grab or gather it, and to hold it at least until values are established. Farmers are in a mood to turn cattle into the fields.

There is a distinct tendency toward holding the more desirable cottons for a better price. One reason for this is that the contract markets provide a hedge for such cotton, while there is no semblance of a hedge for the low grades. Comparatively little white cotton is being offered; offerings, as a rule are confined to cotton that was hedged before the decline. Freezes over northern sections of the belt have put an end to hopes for any further addition to the crop; therefore, should the crop turn out larger than is now expected it must come from under-estimate.

Market Statistics

Basis Middling

	Saturday Oct. 31	Saturday Oct. 24
10 Markets Average.	18.49	20.96
Memphis	19.00	21.75

Premium Staples

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices Steady
1 1/8-in.....	24¼ @26c.
1 3/16-in.....	26½ @28c.
1 1/4-in.....	29 @31c.

Current Sales

	For week	Prev. week	Week before
Memphis Total....	17.250	20.025	18,825
F. O. B. Included.	11,800	12,750	12,250
10 Markets	279,461	238,413	207,907

Memphis Receipts, Shipments, Etc.

	For week	Last year	Year before
Gross Receipts	67,525	56,916	36,931
Net Receipts	31,695	34,508	17,575
Totals since Aug. 1, net	221,432	130,899	86,256
Shipments	54,803	35,514	26,634
Total since Aug. 1....	301,115	191,167	153,513
Total Stock	142,201	107,235	109,941
Increase for week....	12,722	21,402	10,297
Unsold Stock in hands of Memphis factors.	99,600	42,600	.....

Stocks continue to accumulate. The stocks here consists largely of desirable cotton sent here to be held. The total unsold stock, estimated, approximates 100,000 bales, most of which is not being offered. Low middling off color to gray 1 to 1-16 sold here near the close of the week at 18 1-4c., and 1 1-8 at 20 to 20 1-4c., some strict low, dull, 11-8 brought 23c: middling, dull, 1 3-16 25 to 26c., and middling, bright, 1 1-4, 31c.

Staples Very Firm

Basis on Domestics Strong—Egyptians React From Low

BOSTON, Nov. 4.—The marked decline in cotton futures since Oct. 28 was practically offset on all but the lowest grades of domestic staples by an advance in basis and basis has continued to follow the advance in futures thus far this week. Although extra staples are just as strongly held as are the shorter premium cottons the only quotable change is in the latter, this being due to the fact that last week's prices on extra staples were little more than asking prices, whereas now they are firm quotations. At quoted prices most shippers are rather free sellers, although the majority are showing more anxiety to get rid of low grades, particularly in tinged and off color cottons, than they are of middling and better grades.

Egyptians Recover Since Monday

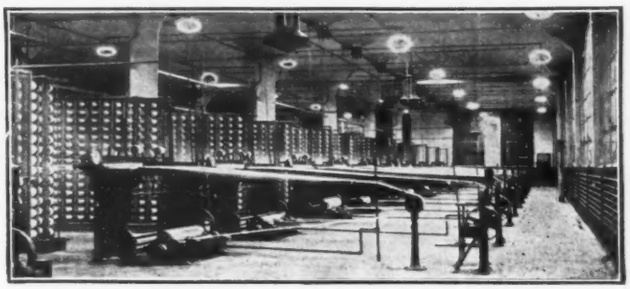
Egyptian prices struck the low for the week on Monday when the November Sak. option sold down to $35.95 and the December Upper option to $25.68; on the same day medium Sak. was quoted locally for prompt shipment at 37¾ to 38c and medium Uppers at 29 to 29½c. Today's closing price for November Sak. is an advance of 65 points over Monday's low and a net loss for the week of 180 points; December Uppers have advanced 92 points since Monday and show a net loss for the week of 110 points. Medium Sak. for prompt shipment has advanced ⅜c since Monday and medium Uppers ½c. At Monday's low prices a fair amount of business was done locally on medium Uppers. Top grades of Sak. for prompt shipment are variously quoted at from 45½c to 46½c.

Current Prices

Acerage prices for Nov.-Dec. shipments of middling and strict middling hard western cotton (full lengths) are as follows:

	Middling	St. Middling
1 1/16 in.....	24½to25½c.	26½to26¾c.
1 1/16 in. to 1⅛ in.....	25½to26½c.	26½to27½c.
1 ⅛ in.....	27½to28¼c.	28¾to29¾c.
1 3/16 in.....	30 to31c.	31 to32c.
1 ¼ in.....	34 to36c.	36 to38c.

John Malloch & Co., Boston, quote Egyptian cotton, c. i. f. Boston for Nov.-Dec. shipment as follows: Medium Sakellarides 38⅜c. off 3⅛c. Medium Uppers 30¼c. off 2½c. They report closing prices Nov. 4 on the Alexandria exchange as follows: November (Sak.) $36.60, off 180 points: Dec. Uppers $26.60, off 110 points from Oct. 28.



SPINNING mills which produce a uniform even yarn for mercerizing—is one reason for Standard Mercerized yarn quality and knitting economy.

STANDARD-COOSA-THATCHER CO.
CHATTANOOGA, TENN.
Sales Office: Lafayette Bldg., PHILADELPHIA
Canadian Representatives:
Wm. B. Stewart & Sons, TORONTO, MONTREAL.

Standard
Mercerized Yarn

Mercerized Yarns

DIXIE MERCERIZING CO. DIXIE STRENGTH QUALITY LUSTRE CHATTANOOGA, TENN.

SPINNERS AND PROCESSORS

Specializing in High Quality Two Ply Combed Peeler Mercerized Yarns

Philadelphia Office:
300 Chestnut St.

Chicago Office:
166 West Jackson Blvd.

READING, PA.
J. Blackwood Cameron, Amer. Casualty Bldg.
FALL RIVER, MASS.
O. S. Hawes & Bro., 38 Rock Street.
TORONTO, CANADA.
Slater & Company, 53 Yonge Street.

DIXIE MERCERIZING CO.
CHATTANOOGA, TENN.

JAMES LEES & SONS CO.

Manufacturers of

WORSTED AND WOOLEN **YARNS**

for Weaving and Knitting

also

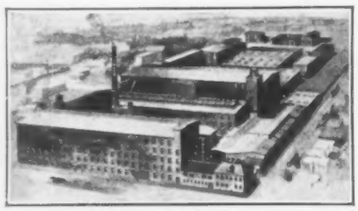
Minerva Yarns for Hand Knitting and Crocheting

Mills and Main Office—Bridgeport, Pa.

New York Office—1107 Broadway

THOS. WOLSTENHOLME SONS & CO., Inc.

Frankford Ave. & Westmoreland St. Philadelphia, Pa. P. O. Station "E"



UNDERWEAR HOSIERY
SWEATER WEAVING

YARNS

COLORS, OXFORDS
AND FANCY MIXES

French and English Spun Worsted
French Spun Worsted Merino

New York Agency: Metropolitan Bldg.

GRUNDY & CO., Inc.

108 S. Front Street, Phila.

Tops and Worsted Yarns

FOR

Men's Wear, Dress Goods and Knitting
Trade both in Grey and Mixtures

G. F. Landman & Co.

308 Chestnut St., Philadelphia

Knitted OUTERwear deserves the preference

WEAVING
KNITTING YARNS

Worsted—Mohair—Merino—Woolen

Bradford and French Systems — White in Oil, Dyed, and Fancy Mixtures

2765 E. 55th St., CLEVELAND 1 Nassau Ave., BROOKLYN, N. Y.

JAMES DOAK JR. COMPANY

WORSTED SPINNERS

KENSINGTON PHILADELPHIA

THE YEWDALL & JONES CO.

Manufacturers of **WORSTED YARNS**

In the gray and in all colors: also fancy mixtures and double and twist

PHILADELPHIA, PA.

BOTANY WORSTED MILLS, PASSAIC N. J.

FINE FRENCH SPUN WORSTED YARNS
Of Every Description for Knitting and Weaving

Represented by

WALTER D. LARZELERE

PACKARD BLDG. PHILADELPHIA 200 Fifth Ave. New York

THE PITKIN WORSTED CO.

PASSAIC, N. J.

Spinners of Worsted Yarns in the Grey for Weaving and Knitting

Represented by

WALTER D. LARZELERE, PACKARD BLDG., Philadelphia, Pa.

Passaic Worsted Spinning Co.

Passaic, N. J.

Worsted Yarns and Tops

FRENCH SPUN MERINO

MOHAIR **WORSTED** WOOLEN

MERINO AND SPUN SILK

YARNS

OF EVERY DESCRIPTION

PERCY A. LEGGE

BOSTON PHILADELPHIA CHICAGO

JEALOUS & FITCH, INC.

Selling Agents for

Virginia Worsted Co. Park Worsted Mills

Knitting and Weaving Yarns

10 High St., Boston, Mass.

WILLIAM RYLE & CO.

381 Fourth Ave. New York
Cor. 27th Street

Thrown Silk Yarns

For Silk, Woolen Worsted
Cotton and Knitting Mills

Star Worsted Compnay

YARNS

FITCHBURG MASS.

WM. H. RICHARDSON WORSTED YARNS

JOS. M. ADAMS COMPANY

Manayunk, Philadelphia, Pa.

Spinners of

WORSTED YARNS

(Bradford System)
for Weavers and Knitters

Rockwell Woolen Co.

Leominster, Mass.

Manufacturers of

WOOLEN and MERINO **YARNS**

FOR WEAVING and KNITTING

Heather a Specialty Mixtures and Decoration Yarns

WORSTED YARN MARKETS

Men's Wear Yarn in Larger Demand

Interest in Mixtures and Gray Yarns Expanding—Price Level Unchanged

PHILADELPHIA. — Demand from outerwear mills continues active and a week to week improvement in sales to men's wear manufacturers is being experienced, although the latter yarns are still selling at proportionately low prices. Dress goods mills are displaying little or no inclination to buy at this time, their business having been seriously affected by the popularity of knitted dress goods this season. Expanding inquiry for gray and fancy mix yarns from men's wear mills is especially noticeable, it being reported several of the largest factors in this trade are experiencing a good volume of orders on cheviots or serge cheviot fabrics, resulting in a good movement of 2-20s to 2-28s quarter blood for use in the former and 2-36s three-eighths (56s) in the latter. Large sized sales of French spun mixtures were placed this week at low prices, being in many instances 20c below competitors' figures.

Stock Lots Absent

Trading in 2-18s to 2-30s, knitting qualities, is proceeding at a brisk rate with a slightly stronger tendency in regard to prices; with the upward trend in medium fleece wools continuing many in the trade look for an advance in quotations before the end of the current month. Knitters are placing contracts in these counts, several of the largest consumers in the country having placed orders in this market during the week, which in several cases call for deliveries until next March. Knitters using 2-30s quarter blood are especially active in this regard, being willing to contract well ahead for this count. While the market is undoubtedly firmer, there has been no advance in quotations, improvement being in the fact low priced stock lots are no longer available and manufacturers are compelled to pay full market prices. Good sized sales of 50s grade were made this week on the basis of $1.42½ to $1.45 for 2-20s while 48s grade has been moved at $1.40 for 2-18s.

Spinners More Active

Knitting yarn spinners in this vicinity are well engaged, many running all the machinery they are able to secure help for, one stating he would be operating every spindle in his plant were he able to locate more help and this would be on orders now on his books. While this condition is fairly general and presents a contrasting appearance to that in evidence several months ago, there is little, if any, speculation in yarns on the part of manufacturers or dealers as was seen last year. Mills are confining purchases to yarn to cover business while dealers are more cautious and refuse to order in advance after having watched the market run away from them a year ago. This naturally gives the present spurt a sounder foundation and may mean that it will be of longer duration than in the past when excessive purchasing all along the line was the common rule.

Cheviot Yarns Selling

Larger sales to men's wear mills, the total representing a good volume, were made this week both in fancy mixes and white yarn, the former being in larger demand than the latter. Gray yarns for skein and piece dye with an active request for 2-36s three-eighths to go into cheviot serge fabrics were active. This count has been bought by manufacturers at less than $1.60, at which it is available from spinners. Yarns of this character are being made into goods which will be worn this fall and winter, clearly illustrating the change which has occurred in recent years. Formerly yarns for goods to be worn this season would have been purchased, woven and manufactured into garments long before this time. While spinners are glad to receive a larger volume of orders they point to this condition as one that prevents them from showing a satisfactory year, claiming they are able to make money only when they are busy for a longer time and running more evenly all year instead of being rushed with immediate delivery business at the last moment as we now are witnessing.

Mixtures are moving at unchanged figures, lowest priced spinners booking orders at $2.35 for French spun, 2-40s half blood. A dealer catering to this trade, however, states he lost an order this week by quoting the above price, giving him a fairly good idea that at least one spinner is bettering this price. Other spinners claim they cannot produce a satisfactory yarn within 20c of this price and fail to understand how a profit is made by those taking such orders, even considering a lowering of their overhead by running more than one shift a day.

Worsteds Affect Wools

A factor many are leaving out of consideration this season according to several in the market, is that worsted business, improvement of which we have recently witnessed for the first time in several years, automatically means a larger consumption of wool, as worsteds, in practically all cases, require a strictly combing wool while woolens may be produced from a combination of wool, noils, waste or substitutes so that an equal number of yards of worsted fabric will require a much larger quantity of wool than a similar yardage of woolens. This should be given consideration according to spinners who look for it to become increasingly important as demand for worsteds expands.

BRADFORD TOP AND YARN CABLE

Bradford, Eng., Nov. 4 (Special Cable to TEXTILE WORLD).—Most topmakers cannot deliver on new contracts before January, and where tops are available for earlier delivery high prices can be made from users who are caught short. Business less brisk because most users are covered to end of year and not disposed to speculate further. Sixtyfours tops at 54d.; 56s at 36d.; 46s carded at 24½d. Yarns hardening and spinners enforcing full quoted rates on new business with 2-48s botany at 5s. 10d.

Quotations

(Corrected to Close of Business Wednesday)

Bradford System

2-12s, low com. (36s)	1.15	-1.20
2-16s, low com. (36-40s)	1.17½	-1.22
2-20s to 2-24s, low ¼ (44s)	1.25	-1.30
2-20s to 2-26s, ¼ bld. (46-48s)	1.35	-1.40
2-26s to 2-30s, ¼ bld. (48s)	1.40	-1.50
2-30s to 2-32s, ¼ bld. S.A. (46s)	1.45	-1.50
2-32s, ¼ bld. (48-50s)	1.60	-1.65
2-20s, ⅜ bld. (56s)	1.55	-1.65
2-26s, ⅜ bld. (56s)	1.60	-1.70
2-36s, ⅜ bld. (56s)	1.65	-1.75
2-32s, ½ bld. (60s)	1.85	-1.95
2-36s, ½ bld. (60s)	1.95	-2.05
2-40s, ½ bld. (60-64s)	2.00	-2.10
2-50s, high ½ bld. (64s)	2.25	-2.30
2-50s, fine (66-70s)	2.30	-2.35
2-60s, fine (70s)	2.85	-2.90

French System

20s, ¼ bld. (48s)	1.50-1.60
20s, high ¼ bld. (50s)	1.60-1.70
20s, ⅜ bld. (56s)	1.75-1.80
30s, ⅜ bld. (56s)	1.80-1.85
30s, ½ bld. (60s)	1.85-1.90
40s, ½ bld. (60-64s)	2.00-2.10
50s, (66-70s)	2.35-2.45
60s (70s)	2.90-2.95

Knitting Yarns in Oil (Bradford)

2-20s, low ¼ bld. (44s)	1.25-1.30
2-18s to 2-20s, ¼ bld. (48s)	1.40-1.45
2-26s, ¾ bld. (48s)	1.45-1.50
2-30s, ½ bld. (48s)	1.50-1.55
2-20s, ⅝ bld. (56s)	1.60-1.65
2-20s, ¾ bld. (60s)	1.95-2.00

French Spun Merino, White

30s, 50-50	1.60-1.65
30s, 60-40	1.73-1.80
30s, 70-30	1.85-1.90
30s, 80-20	1.95-2.05

Yarns Forge Slowly Ahead

Considerable Resistance to Higher Prices Encountered

BOSTON.—The worsted yarn market is still up against strong resistance shown by consumers to any advance in prices. That spinners are not free to make their own prices, these being indicated for them by a strong top and wool market has been altogether insufficient to alleviate the situation. Business nevertheless is in larger volume but values are barely firm. Selling spinners however are so dependent upon new business to keep things going that production at cost, or at times even below, seems a more satisfactory proposition than to further curtail their spindle activity to lower production.

Slight flurries of interest occur from time to time but there is nothing very steady about anything in the apparent forward movements. The situation nevertheless seems slightly better and this is seen as much as in men's wear yarns as in any other section of the market. "There is more movement in volume than in prices," said a spinner in this market. So far as wools and tops are concerned both markets are stationary for the week, nor are there any indications of any further advances at the moment. The best that is expected is that current levels for the raw material and the semi-manufactured products will be maintained for the balance of the year.

There is some spotty buying going on. Buyers are taking small lots quite regularly and specifications are coming in more freely. Men's wear weavers in some cases are running more on novelty lines and there is a fairly active demand for yarns used in the manufacture of these goods. Women's wear seems to be unchanged. French spun yarns remain on about the same basis. Knitting yarns are considered a little stronger in some cases. Prices are somewhat irregular however. For example, 2-18s high ¼ blood yarns have sold recently for $1.35 to $1.37½ and a limited quantity up to $1.40 or a little better. Many concerns, however, are holding yarns of this quality at $1.45 to $1.47 for stock made from a good 50s wool. Some knitters are still attempting to buy at the low point of $1.35. Replacement value is considered fully up to $1.45.

Tops Very Firm

More Business at Better Prices—Noil Decline Checked

BOSTON. The top market has enjoyed another fairly good week. Additional business has been placed in ½ blood, high and low ⅜ blood, 46s and 36s, other grades being neglected. Prices were somewhat irregular, part

DUPLAN
SILK CORPORATION
COMMISSION DEPARTMENT

Have

DUPLAN

SIZE Your

RAYON

New York Office
135 MADISON AVE.

Southern Office
JOHNSTON BUILDING, CHARLOTTE N. C.

Mills at
HAZLETON—DORRANCETON—NANTICOKE, PA.

OSCAR HEINEMAN CORPORATION

RAW & THROWN SILK

ARMITAGE, FAIRFIELD AND WASHTENAW AVENUES

CHICAGO

Fine French Spun Worsted Yarns

for Knitting and Weaving

VISCOSE RAYON YARNS

NEUBURGER & CO., INC.
Established 1866
160 Fifth Avenue, New York

Sole United States Selling Agents for

Schachenmayr Mann & Co., Salach, Germany
Kammgarn Spinnerei Bietigheim, Germany
Textilwerke C. G. Schoen, A. G. Sosnowiec, Poland
Spinstofffabrik Zehlendorf, Berlin, Germany

PFINGST YARNS
MADE BY A KNITTER FOR KNITTERS

Rayon for Spot Shipment

150 Denier Rayon on Cones
150 Denier Rayon and 1, 2 or 3 ends Japan Silk on Cones
80 Denier Cones or twisted with 1, 2 or 3 ends Japan Silk on Cones
150 Denier Twisted with 50/1 Worsted on Cones
Two Ply Mercerized Yarns twisted with 1, 2 or 3 ends Japan Silk
Japan Silk on Cones, 2 to 12 Thread Inclusive.

GEO. B. PFINGST, Inc.,
302 Chestnut St., - Phila., Pa.

Silk, Rayon, Rayon and Silk

RAYON TOPS AND PROCESSED CARDED

"The Standard of Workmanship"

Also Rayon Combed and Processed Carded on Commission.

SAMUEL A. WOOD COMPANY, Chester, Pa.
Sole Selling Agent—J. T. Robey, 248 Chestnut St., Philadelphia

---

GARTH MFG. COMPANY

RAYON SILK TOPS, NOILS AND CARDED STOCK
FOR KNITTING AND WEAVING YARNS

Tel. 4511 Passaic. 72 Summer Street, Passaic, N. J.

RAYON

WINDING
CONING TUBING
COPPING DYEING

Yarns for Knitting and Weaving

Beck Rayon Co.

198-200 Greene St., New York City.

Maanexit Spinning Co.

WEBSTER, MASS.

Spinners of
FINE WOOLEN AND MERINO **Weaving Yarns**
ALSO KNITTING YARNS

French TEASELS

JACOB N. CHESTER
109 Broad Street New York

Worsted Yarn Markets—Continued

of the business at the low edge of quotations following this market and part of the business at the high edge of the market, much depending upon the character and the keenness of the buying and delivery demanded. No change is made this week in the top quotations following this market.

The wool situation is so very firm that top makers unable to secure any concessions are inclined to ask higher prices. Said one of them in discussing the situation "we are not trying to put prices up, but are compelled to adjust our quotations from time to time as we are at the present time, much more than usual it would seem, under the domination of the wool market." The Bradford market continues its advance, all merinos being up another penny per pound for the week.

The noil market is firmer, particularly in the best grades. Quotations for week are unchanged. The market is not overstocked with choice materials and the defective noils being handled on the street at low prices tend to give a wrong impression as to where the market really is for best domestic materials. Output of noils is on the increase and this is likely to continue for some months to come in view of continued expansion of demand for worsted fabrics. Taking the market as a whole it is still however a buyer's market, but this situation is likely to be quite temporary.

Dealers could sell larger quantities of noils to the mills if they would meet the purchasers' ideas of values. This they seem unwilling to do. Those who have noils believe in higher prices in the near future. Said a leading comber "I think, if anything, that the noil market is firmer. We have sold our production up to the end of the year at good strong prices that would require a higher level than the one now current in order for the seller to make any profit." If the noil stocks held on Summer Street had to be cleaned out on today's prices there would be an all around loss. There is, however, no necessity for any such drastic selling. The situation financially is all right and holders can wait for a better market.

Current Quotations

Tops	
Fine (64-66)	$1.60-$1.65
Half-blood (60-62s)	1.47- 1.50
High ¾ blood (58s)	1.27- 1.30
Aver. ¾ blood (56s)	1.22- 1.25
Low ¾ blood (52-56s)	1.17- 1.20
High ¼ blood (50)	1.07- 1.10
46s	.97- .98
44s	.90- .92
40s	.87- .88
36s	.84- .85
Noils	
Fine	$ .88- $ .92
Half-blood	.80- .85
High ¾ blood	.70- .75
Aver. ¾ blood	.60- .65
Low ¾ blood	.58- .60
High ¼ blood	.53- .58
46s	.50- .55
44s	.45- .50
40s	.45- .48

AUBURN, MASS. The textile industry is the largest taxpayers in this town, the assessments this year being as follows: Textileather Co., $11,662; Pondville Woolen Mills, $1,992.35; Auburn Worsted Co., Inc., $1,272.39; Ettrick Mills, $1,195.20.

Men's Wear Market

(Continued from page 111)

which clothiers have begun to display in staple worsteds. Some agents foresee a return of interest to serges, but others say that the utility of dark blue fabrics is still limited and that they have come into prominence lately in a way which might make it seem that they bulked larger in the total trade than they actually do.

Men's Wear Notes

The American Woolen Co. has opened in Department 3, fall 1926, lines of shirtings at $1.25 to $1.70, lines of mackinaws, etc., at $1.45 to $2.35, and three-quarter goods at 69 to 73c. Terms are regular.

* * *

The Freneau-Nelson Co., Inc., has opened staple shirting lines for the work shirt and wind-proof flannel shirt trade at prices said to be about the same as a year ago. On cotton warp 36-inch goods prices range from 30 to 70c. The lines include the Menia, Larchmont, Doncaster, Kensington, Hammertown and Centurian brands.

* * *

Parker, Wilder & Co. are featuring for fall 1926 a comprehensive line of all-wool plaided shirting flannels, all-wool broadcloths and cotton warp O. D. shirtings at $1.10 to $1.50 net, 54-inch width, stressing the bright patterns in demand for shirts and blouses.

* * *

Stoney & Starkey, Inc., have advanced prices on the Murdock Woolen Mills Co.'s ranges 420 and 421, all wool cassimeres. Range 420 is increased from 97½c to $1, and range 421 is advanced from $1 to $1.02½.

* * *

B. Priestley & Co., Inc., have advanced prices on worsteds and mohairs for spring, as follows: Worsteds—Range 3494, from 2.27½ to $2.32½; range 3489, from $3.05 to $3.15, and range 3350, from $3.05 to $3.15. Mohairs—Range 3696, from $1.52½ to $1.60; range 3416, from $1.85 to $1.95; and range 2977, from $2.05 to $2.15.

* * *

Metcalf Bros. & Co. are reported to have advanced about 12 lines of semi-staple piece dyes from 5 to 15c per yard.

* * *

Stillwater Worsted Co. staples and semi-staples have been advanced 10 to 12½c according to report, though the line is said to be sold out two months ahead.

* * *

Mill agents are not pleased over the upturn in raw wool and yarns. They trust it will not be carried beyond limited bounds for they believe the consumer is determined not to pay more for his garments and that a rise in fabrics will meet great resistance.

Pocasset Worsted Company, Inc.

Worsted Yarns

Office and Mills — Thornton, R. I.

WORSTED YARNS — GRAY AND FANCY SHADES — BRADFORD — STEEL — SYSTEM — TWIST SAMPLES AND MIXTURES — WEAVING — KNITTING

WARNER J. STEEL

Successor to EDWARD T. STEEL & CO.

Mills and Office — BRISTOL, PA.

WORSTED AND MERINO

FRENCH SPUN YARNS

FOR KNITTING AND WEAVING

Manufactured by

JULES DESURMONT WORSTED CO.

WOONSOCKET, R.I.

PHILADELPHIA BOSTON PROVIDENCE — THOMAS H. BALL SELLING AGENT — NEW YORK MILWAUKEE CLEVELAND

Mohair and Worsted

LOOP and NOVELTY YARNS

Massachusetts Mohair Plush Co.

200 DEVONSHIRE ST., BOSTON, MASS.

Mills at Lowell, Mass.

O. J. CARON

WORSTED AND WORSTED MERINO YARNS

166 W. JACKSON BLVD., CHICAGO

Figured Satin of Du Pont Rayon

SATIN—once one of the most popular and profitable of fabrics—is "coming back" strongly now that it can be improved with the soft lustre of Du Pont Rayon.

For, besides the warm richness imparted by the combination of Du Pont Rayon with silk, the manufacturer is enabled to add a spirit of newness by enhancing the usually plain surface of this fabric with figured motifs of his own designing.

In fact, to every fabric, Du Pont Rayon adds an indefinable something that makes it stand out above all others—regardless of price.

Du Pont RAYON *is reviving the popularity of Baronet Satin. It adds a new and more brilliant lustre to this preferable fabric and enables you to work into it striking designs that will stamp it as your individual own.*

Du Pont RAYON, *with textile virtues all its own, bows to no other material. For in* RAYON, *a new composite is expressed—lustre and softness combined with strength and filling qualities. Thus in* RAYON *is found the economy that conservation demands.*

DU PONT RAYON CO.
BUFFALO, N.Y.

Branch Sales Offices:
132 Madison Avenue, New York City
31 North Sixth Street, Reading, Pa.
Old Hickory, Davidson County, Tenn.
569 Mission Street, San Francisco, Cal.
408 Woodside Building, Greenville, S. C.

Canadian Agents:
WM. B. STEWART & SONS
64 Wellington Street, W., Toronto

DUPONT RAYON

RAYON AND SILK YARNS

Rayon Users Awaiting First Quarter Prices

No Change in Level Looked for —Imports Continue Heavy —Premiums Disappearing

The rayon market continues firm with the larger sellers still somewhat behind in their deliveries on fourth quarter contracts. While many producers have improved their position in this respect, they are still turning down business offered them by cotton mills. The latter are in need of additional quantities of 150s for use during the months of November and December.

While there is no surplus of yarns in the 150 denier size, cotton manufacturers who could use them readily are not inclined to pay anything more than nominal premiums to secure them from second hands. For this reason the premiums noted over the last several months are gradually getting smaller, and in many cases sellers have been forced to take the regular list quotations or sit on their surplus. This surplus appears to come principally from hosiery mills which have found it advantageous to switch at least a part of their production into the all-silk numbers where they have been making silk and rayon goods.

The opening of producers' books for the first quarter of 1926 is expected to bring no change in prices. Sellers count upon taking enough business as soon as the books are opened to take care of their entire output for the first quarter. Reports in the trade indicate that the increased importation of rayon lately noted is being maintained.

Prices for the last quarter, as based on the product of the Viscose Co., Tubize Artificial Silk Co. of America, du Pont Rayon Co. and Industrial Fibre Corp. of America, are as follows:

Denier	"A"	"B"	"C"
50	$3 50	....	....
60	3 40	$3 15	$2 50
70	3 25	3 05	2 50
75	3 10	2 90	2 70
80	3 10	2 90	2 40
90	3 00	2 80	2 40
100	2 90	2 70	2 50
120	2 45	2 30	2 10
130	2 25	2 10	1 90
140	2 15	2 00	1 85
150	2 00	1 90	1 86
160	2 00	1 90	....
170	1 90	1 80	....
180	1 90	1 80	....
200	1 90	1 80	1 70
300	1 75	1 65	1 55
450	1 75	1 60	1 45

Prices on Celanese, made by the American Cellulose & Chemical Mfg. Co. are as follows:

45	$5 00
75	3 75
100	3 65
*120	3 50
150	2 90
*170	2 85
200	2 75
*250	2 70
300	2 70

*Imported.

Combination yarn prices are as follows:

80 Denier Cellulose

3 ends 13/15 double extra A raw silk	$4 85
4 ends 13/15 double extra A raw silk	5 05
5 ends 13/15 double extra A raw silk	5 20

150 Denier Cellulose

1 end 13/15 double extra A raw silk	3 10
2 ends 13/15 double extra A raw silk	3 45
3 ends 13/15 double extra A raw silk	3 65

Rayon Notes

Comment on "Rayon" Resolution

An announcement of the resolution of the Federal Trade Commission endorsing the term "rayon," printed in these columns last week, has been issued by Herman Blum, of the Craftex Mills, Inc., who is a member of the committee which created the term and has been sponsoring it ever since.

The statement comments on the resolution as follows:

"Vernon W. Van Fleet, chairman of the Federal Trade Commission, announced that he was glad that the Commission was able to give approval to the term 'Rayon' as it represented a progressive movement in the trade and would result in eliminating such misrepresentation and confusion as has been current in connection with the use of silk and the fibre produced chemically.

"In order to protect the word 'Rayon,' the committee which has been sponsoring its adoption has found it advisable to register the word in the following countries: Argentina, Brazil, Cuba, Mexico, and Uruguay.

"Patent attorneys have registered this word 'Rayon' in these countries for the National Retail Dry Goods Association and with the understanding that when the proper time comes, the word will be dedicated for the use of the public. The registration at this time being made for the purpose of preventing anyone from appropriating it for improper use.

"When the announcement of the Federal Trade Commission was made, that it had finally adopted the word 'Rayon,' congratulations began to pour in on S. A. Salvage, of the Viscose Co., who headed the committee which created the name 'Rayon', as the adoption of this name by the Government board is considered the concluding and official endorsement for which the sponsors of 'Rayon' have been striving.

"It is interesting to note that the word 'Rayon' was proposed only one year ago and during that short period of time has conquered the entire weaving, knitting, dyeing, retail distribution and every phase of the textile business."

* * *

Carolina Cities Seek Rayon Plant

DURHAM, N. C.—Announcement that North and South Carolina textile interests are making an investigation of rayon and rayon processes and costs, with the possible decision to build a rayon plant somewhere in the Carolinas as the outcome, has been followed by a number of offers from cities of the section to finance, or to aid in financing the plant if located

RAYON

Fast Dyed Sized

Fast and Direct Color Work in Single and Ply Silk for the Following Trades:

Woolens and Worsteds
Cotton Goods
Electric Wire
Knit Goods

Special Colors Dyed to order for prompt Delivery. Color Card on application.

ROBISON RAYON CO., Inc.
20 West 22nd St., New York

Sales Representatives:
James T. Elder, 308 Chestnut St., Phila, Pa.
Heineman & Seaman, Inc., New Bedford—Providence.

NOUVELLE SOCIÉTÉ DE CONSTRUCTION
Formerly N. SCHLUMBERGER & Cie
GUEBWILLER, FRANCE
Established in 1808

Specialists in the manufacture of

COMBING, DRAWING & SPINNING MACHINES

for Cotton, Worsted and Silk Waste

FRENCH SYSTEM

JULES SCHWEIGHOFER
356 Winter St., Woonsocket, R. I.
GENERAL AGENT FOR U. S. A. AND CANADA

SNIA-VISCOSA

CHEMICAL TEXTILES

IT IS to your interest to know that some of the Snia-Viscosa factories were among the pioneers in the production of Rayon, and gradually developed to be the largest producers in Europe.

In addition to the excellent *qualities* of the Snia-Viscosa Rayon in the raw, known the world over, we are able, through our large plants in this country, to offer the trade an up-to-date *service* in converted yarns of every description, both dyed and in the natural color.

Extensive experience and knowledge are undoubtedly of great advantage to consumers who secure their requirements through this old established and reliable firm.

NOTE:
In addition to Viscose Rayon, we are now prepared to submit samples and quote on 60 to 100 denier sizes of Nitro-Cellulose Rayon (made according to the most generally accepted alcohol process) the excellence of which, for special requirements, is well known to American manufacturers.

Commercial Fibre Co. *of America, Inc.*

General Offices: 15 East 26th St., New York City *Converting Mills:* Passaic, N. J.

REPRESENTATIVES:

Wm. G. Burke, Reading, Pa. Walter Schmaedig, Philadelphia, Pa. Geo. J. Loerzel, Chicago, Ill. Wm. Wulfers, Providence, R. I.
H. T. Cosby, Charlotte, N. C. and Chattanooga, Tenn.

Rayon and Silk Yarns—Continued

within their respective territories. It is understood that Winston-Salem, Charlotte, Asheville, Wilmington, High Point, and Fayetteville in North Carolina; Richmond, Danville and Roanoke in Virginia; and probably some South Carolina cities are asking for location of the plant.

* * *

Rayon Expert to Visit America

Dr. Alfred G. Perl, of Chemnitz, recognized European authority on the manufacture of viscose rayon, is planning a tour of the rayon works in Japan and expects to return home via New York. He should arrive here about the middle of January.

Dr. Perl has equipped a very large number of rayon plants. He has recently been very busy in England where, he states, new plants with a total capital of several million pounds sterling will be started this year.

* * *

To Handle Rayon Yarns

L. A. Sandler, a graduate of the Philadelphia Textile School, is now associated with E. H. Moyer, Philadelphia, handling rayon yarns.

Spun Silk Firm

Market Quiet But Steady With Sellers Booked Up to End

The spun silk market is quiet but firm. Prices were quotably unchanged last week with ply yarns holding above $6.50. There was a fair inquiry for nearby deliveries with requests usually for small amounts, but not much is doing for the spring of 1926. Sellers are now booked pretty solid up to the end of the year with a considerable quantity of business on their books for deliveries up through March, so that the present lull is looked upon merely as an interlude which will give time to adjust deliveries and production. Schappe was quiet due to the erratic fluctuations in exchange. Prices are as follows:

60—2	$6.60	30—2	$5.65
50—2	6.30	20—2	5.30
40—2	6.00	60—1	5.15

Thrown Silk Quieter

Rush to Cover November, December Needs Subsides

The rush to cover November and December requirements of crepe and tram yarns subsided last week and the market became somewhat quieter. A fair business was reported, but there was no concerted covering movement such as was noted in the two weeks previous. Prices for thrown yarns were easier with most houses quoting the heavier crepe and all tram yarns from 5c to 10c a pound lower. These reductions were made possible by the lower raw market, but in the case of crepe twists 5c a pound was the usual concession due to the firm trend of commission throwing prices. Dealers handling the hosiery trade reported a good inquiry for spring deliveries of tram. Organzine as in past weeks was rather quiet. Prices are as follows:

(60 days basis)

Japan Organzine 2 thd Crack XX in skeins	$8.15
Japan Tram 3 & 4 thd in skeins	7.55
Japan Tram 5 thd on cones	7.45
Japan Crepe 3 thd on bobbins 65 turns	8.15
Japan Crepe 2 thd XXA on bobbins 70 turns	9.50
Canton Crepe 14/16 3thd on bobbins	7.30

Waste Markets Quiet

Silk Wastes Firm While Rayon Show Easier Trend

The waste markets were quiet last week with only moderate buying going on either in the silk or the rayon wastes. There was a very firm trend to the silk wastes particularly good spinners and winders which are scarce. At the same time spinners hesitated to pay the prices asked by dealers in view of the possibility of getting in better shipments of foreign qualities. It is hoped that larger shipments of Canton steam waste will be coming through now that the situation in China is clearing up. Rayon wastes were reported as fairly active last week with a sizable amount of buying going on.

Prices are as follows:

Winders' waste (silk)	$1 25
Spinners' waste (silk)	1 20
Open bleached rayon	52½@57½
Thread waste white rayon	37½@42½

French Silk Trade Upset by Politics

WASHINGTON, D. C.—Unstable French political conditions have had their effect on the silk market in recent weeks, reports Vice Consul C. B. Follmer, at Lyon. Consul Follmer advised that the hiatus in the settlement of the French debt to the United States generally was regretted in business circles. The sudden rise in the dollar at the moment when an improvement in the franc was hoped for created a certain activity in the raw silk market and prices advanced from 2 to 3%, reported Mr. Follmer. Actual needs are partly covered and both buyers and sellers prefer to wait for the opening of the French Parliament to see what official action will be taken.

Weaving mills are working at almost full capacity and looms consume large quantities of natural silk because of the materials demanded by present styles. Manufacturers closely are watching fluctuations in exchange and are ready to buy raw silk at the first signal of alarm so as to lay in a stock before prices go too high. Stocks are low and orders are given in advance for silk that is still en route for the Orient. The bulk of shipments now afloat already are sold.

*HOLYOKE, MASS. The group of individuals connected with the McCallum Hosiery Co., of Northampton, Mass., on Nov. 2 made the initial payment on the property of the Goetz Silk Mfg. Co., which they will acquire. The purchase price is in the vicinity of $150,000.

Manufacturers of
HOSIERY TRAM

Artificial Silk on Cones

Artificial Silk twisted with Raw Silk

Artificial Silk twisted with Worsted

VAN STRAATEN AND HAVEY, Inc.

Artificial Silk twisted with Cotton

Mercerized Cotton twisted with Raw Silk

Sample Cones sent on Request

137 Berkley St., Wayne Junction
PHILADELPHIA

New York Office: 389 Fifth Ave.

Boston Representative:
Perkins & Boland, Inc., 80 Federal St., Boston
Southern Representative:
French Campbell, Jr., 316 James Bldg., Chattanooga, Tenn.
Pennsylvania Representative:
H. L. Nattress, 550 McKnight St., Reading, Pa.
Western Representative:
Campbell & Van O'Linda, Utica, N. Y.

RODNEY HUNT MACHINE COMPANY

RODNEY HUNT

Silk Reel Machine

(PATENTED)

New Design of Oval Slatted Reel and Round Front Reel gives strength without unnecessary weight.

for

Rayon Fabrics

RODNEY HUNT MACHINE CO.
66 Mill Street Orange, Mass.

Mr. I. Kno-Wool says:

'A Wise-Cracker is a Floridan who sold his swamp for a million.'

"Some people are going to find out that much of the Florida real estate is not edible, and be sorry they did not invest in a few overcoats up where food is plentiful and cheaper."

THE BASCH & GREENFIELD CO.

REWORKED WOOLS

Home Office & Mills Newark, N. J. | ESTABLISHED 1872 | Phila. 114 Chestnut St.

Philadelphia Wool Scouring and Carbonizing Co.

WOOL

Scoured and Carbonized

Freight Address: Coral St. Sta., P. & R. R. R. Somerset and Trenton Ave., Phila., Pa.

EAVENON & LEVERING CO.

Scouring AND Carbonizing of WOOL AND NOILS

The Standard of Workmanship

Storage and Forwarding both in and out of bond

CAMDEN, NEW JERSEY

Philadelphia and Reading Railway Sidings

Line at Side Actual Size

ROACH DOOM

AT LAST, A REAL MOTH DESTROYER AND PREVENTATIVE

EDGAR A. MURRAY'S MOTH DOOM sprayed directly on Wool, Yarns, Finished Cloth, Rugs, etc., not only destroys all worms and larvae, but leaves a preventative against future attack.

Will not stain the finest fabric.

Guaranteed ABSOLUTELY.

NO RIDDANCE — NO PAY

For full particulars apply to

HAINSWORTH SUPPLY COMPANY

2411 N. 6th St., Phila., Pa.

RAT DOOM

Twenty Years Manufacturing Cloth Boards

THE CHAFFEE PATENT CLOTH BOARD

They Save Their Cost in Freight *Clean, LIGHT and Strong*

Made of Paper and wood

Need no covers

Will not Split or Warp; not liable to break

BOX SHOOKS and CLOTH BOARDS

M'f'd by CHAFFEE BROTHERS CO., Oxford, Mass.

WOOLENS COTTONS

SJÖSTRÖM Patent Cooling and Conditioning Machines

A positive necessity for every textile manufacturer

MANUFACTURERS MACHINE CO.

North Andover,

WORSTEDS Mass. SILKS

ALL STEEL

ECONOMY

FIRE PROOF

BALING PRESSES

ALL SIZES FOR ALL PURPOSES

LARGEST LINE BUILT IN U.S.A.

ECONOMY BALER CO., DEPT. J, ANN ARBOR, MICH. U.S.A.

KROUT & FITE MANUFACTURING CO,

Manufacturers of

Silk, Cotton and Mercerized Narrow Fabrics

SPOOL TAPES A SPECIALTY

Telephone Connection. Office and Mill, Allegheny Ave. and Emerald St., Philadelphia

---

GORDON BROTHERS, INC.

HAZARDVILLE, CONN.

Reworked Wool, Wool Waste

Custom Carbonizing by Dry Process

FRANKEL BROS. & CO.

42-48 Commercial St., Rochester, N. Y.

OUR SPECIALTY: We grade new woolen clippings ready for the picker. Write for samples and prices. Correspondence solicited.

ART SILK TOPS and NOILS

S. FEATHER CO.

110-16 Erie St., Camden, N. J.

M. Salter & Sons

WOOLEN RAGS

REWORKED WOOL

Custom Carbonizing and Picking

Chelsea, Mass.

MACUNGIE SILK COMPANY

Macungie, Pa.

For binding Cotton and Woolen Bed Blankets.

Bindings and Ribbon

Go-Cart Covers, Kimonas, Bath Robes, etc. Special Colors or Shades made to order.

WOOL MARKETS

Mill Resistance to Higher Wool Values

Market Stationary as to Prices—Fine Wool Consumption Declined in September

BOSTON.—The Summer Street wool market is firm and the tone is good, but there is still room for general improvement. The situation is not quite as it ought to be although not without some promise. Prices are not registering any further advance. Any urgent buying of fine wools might probably lift clean values 3-4c higher but manufacturers are in the market only at intervals and are still unreconciled to any higher values for wool. The situation therefore is at a standstill for the moment and there is nothing particularly in sight to bring about any major change either one way or another.

Mill interests are positively opposed to higher wool prices and far from making any purchases ahead are still following the cautious policy of buying only so fast as the situation on their orders and contracts would seem to warrant. In fine domestic wools there seems to be a shortage and fine territory is quoted $1.30-$1.35 while delaine wools cannot be purchased in volume much under a $1.40 basis. Although the Australian market for merinos is undeniably strong yet when the full allowance is made for the better skirting and packing of Australians, values on choice domestic wools are not far from a parity with the foreign wools, even when the duty of 31c per pound is taken into account.

Increasing resistance offered by mill purchasers to any further advances in either spot foreign or domestic wools and on the other hand strong to rising markets at the primary centers, the Colonial markets being approximately 5% higher, feature the week. Sales in Australia have been so unexpectedly successful and clearances so good the November and December offerings will be increased by 10%. Our domestic manufacturers are afraid that any further advances in raw materials may put an end to the growing confidence shown by the goods market. Repeat orders are now being received in larger volume and a half a dozen or more mills during the week have advanced prices for their men's wear fabrics. Some buying is occurring in the Australian markets for the account of American manufacturers but the bulk of the purchasing is for British and French interests.

Wool consumption for September showed a further moderate increase of 5% rising from 42,149,000 grease lbs. in August to 44,383,000 lbs. in September. This showing confirms slight increases registered in spindle and comb activity. Consumption of fine wools actually showed a decline while ½ blood wools increased approximately half a million pounds and ¼ bloods approximately a million pounds. The consumption by grades was as follows: fine, 8,789,000 lbs., decrease of 376,000; ½ blood 5,139,000 lbs., increase 542,000; ⅜ blood 4,939,000 lbs., increase 186,000; ¼ blood 6,794,000 lbs., increase 897,000; ¼ blood low 1,799,000 lbs., increase 52,000; carpet 10,393,000 lbs., increase 424,000.

In the South American markets higher values are being made and recent offerings to Boston houses have been at least 1c per pound higher than the market here. The situation could of course be met by higher prices being made on South Americans in bond. There has been some appreciation in prices in these sorts recently particularly in the Montevideo 50s which are considered an excellent substitute for our high domestic ¼ blood. This wool is quoted in Boston at the present time at 44c. There have been no arrivals of new clip Montevideo wools as yet.

An English view of the situation is that after months of depression and a remarkable fall in values the turn of the tide has come and prices have taken a sharp turn upward. The rise has come just at the moment when at the different selling centers in Australia there is to be offered before the end of the year approximately 1,150,000 bales of new clip wools. The disaster which resulted early this year was due to the backing up of supplies and this resulted from a falling off in consumption. Everything will depend upon how the trade can deal with the big weight of wool that is going to come upon the market.

Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Oct. 31 with totals for year to date as compared with those of a similar period in 1924, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows, in pounds:

RECEIPTS AT BOSTON SINCE JAN. 1

	Week Ended Oct. 31	1925	1924
Domestic	2,214,000	119,274,000	170,980,000
Foreign	2,107,000	145,990,000	96,764,000
Total	4,321,000	265,264,000	267,744,000

IMPORTS AT PRINCIPAL PORTS

Boston	2,107,000	145,990,000	96,764,000
Philadelphia	1,105,000	77,470,000	53,545,000
New York	837,000	58,538,000	59,361,000
Total	4,049,000	281,998,000	209,670,000

BRITISH WOOL CABLE

Bradford, Eng., Nov. 4 (Special Cable to TEXTILE WORLD).—All wools are against the buyer at Bradford. British wools continue to harden. Hosiery sorts specially wanted. East India wool sales closed with steady competition and opening rates well maintained.

Quotations

(Corrected at close of business on Wednesday)

Ohio, Pennsylvania and West Virginia

Fine delaine	.54—55
Fine clothing	.46—47
½ blood	.52—53
⅜ blood	.52—53
¼ blood	.52—53

Michigan and New York

Fine delaine	.52—53
Fine clothing	.44—45
½ blood	—52
⅜ blood	.51—52
¼ blood	.50—51

California
(Scoured Basis.)

Northern, 12 mo.	1.23—1.25
Sp'g middle counties	1.10—1.12
Southern, 12 mo.	1.02—1.05
Fall free	1.05—1.07
Fall defects	.90— .95
Carbonized	1.05—1.10

Texas
(Scoured Basis.)

Fine 12 mo.	1.25—1.30
Fine 8 mo.	1.10—1.15

Pulled—Eastern
(Scoured Basis.)

A.A.	1.20—1.25
A-fine	1.15—1.20
A-Super	1.08—1.13
B-Lambs	.87— .92
B-Super	.92— .97
C-Super	.70— .75
C'bgs fine	1.10—1.15
Medium B	.90— .95
Medium C	.70— .80

Montana, Idaho and Wyoming
(Scoured Basis.)

Staple fine	1.28—1.32
Do. ½ bld.	1.18—1.22
Fine & fine medium clothing	1.20—1.25
⅝ blood	1.03—1.05
¼ blood	.98—1.00

Utah

Fine	1.25—1.30
Fine medium	1.20—1.25

Colorado, and New Mexico

Fine	—1.25
½ blood	1.13—1.15
⅜ blood	.98—1.00

Mohair
Domestic

Best combing	.73—79
Best carding	.63—70

Foreign (In Bond)

Turkey Fair av.	.52—53
Cape Firsts	.42—43

Foreign Clothing and Combing
(In Bond.)

Scoured Basis—Cape (nominal):	
Super 12 months	1.10—1.15
Super 10-12 months	1.03—1.07
Australian:	
70s	1.18—1.20
64s	1.03—1.08
58—60s	.88— .90
Grease Basis:	
Montevideo:	
58—60s	.48—49
56s	.46—47
50s	.44—45
Buenos Aires:	
44s	.33—34
40s	.30—31

Foreign—Carpet
(Grease Basis in bond)

Aleppo: Washed	.41—42
Angora:	.23—24
Awassi: Washed	.38—39
Karadi: Washed	.40—41
China: Combing	.32—34
No. 1 W'ld ball	.44—45
W'ld filling	.31—32
Szechuen ass't	.31—32
Cordova	.26—27
Khorassan: White, 1st clip	.34—35
2nd clip	.30—32
Mongalian: Urga	.39—40
Manchurian	.33—35
Black Face	.28—29
Servian skin wool	.31—33
East India: Kandahar	.41—42
Vickan'r	.43—48
Joria	.46—50

Pulled Wool More Active

Larger Demand for Pulled and Prices Advance—Fleece Grades

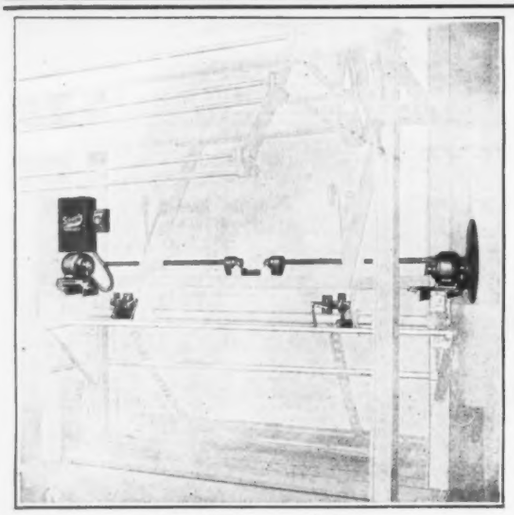
PHILADELPHIA.—There is a fair interest in all grades with more activity appearing in pulled and scoured with slightly less interest, than has been apparent in recent weeks, in combing wools. Prices of the latter are higher while no change is apparent in fleece or territory. Trading this week indicates a slightly different trend, there being a less active request from worsted spinners and a better demand from woolen mills than has been noted for several months. Dealers have sold larger quantities of pulled and scoured and at prices five cents higher than were possible two weeks ago. Prices in both combing and woolen wools, however, are strong and although less active business from spinners is reported the trend is still upward, a number of consignors now holding bright quarters at 55c. The market has been strengthened by foreign situation and lack of large supplies of domestic wools.

Worsted manufacturers and spinners are also displaying interest in pulled wools in the grease, turning to these in preference to fleece or territory where possible in order to take advantage of the comparatively lower prices of pulled, which have not advanced in proportion with fleece wools. Several pulled and scoured dealers state practically all of the business they have done this week was with worsted mills. Demand from this trade has been for medium grades, there being little interest in any grade coarser than 50s.

Fine Pulled More Active

Other dealers have noted a better interest from woolen mills especially in AAs, fine As and A supers which are moving at higher prices, one dealer reporting the best business he has booked since last February. Sales of AAs have been reported from $1.20 to $1.28, the latter being an especially desirable lot as $1.25 is usually the top price manufacturers will consider. Good B supers are being sold on a basis of 90c while average grade Bs have moved at 85c, and a few lots

(Continued on page 148)



Eliminate uneven widths!

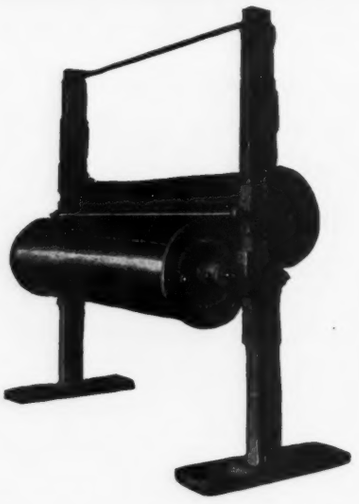
Attached to wool dryer

More even stretch, increased production and less labor expense follow the use of the Schwartz Automatic Electric Guider for cotton tenters and wool dryers. This guider handles cloth of any kind, weight or width. Extremely simple, it requires practically no attention.
The cloth runs as freely as in the case of hand feeding. It is the only guider known for velvets, plushes and other delicate-faced fabrics.

Write for further details

The Schwartz AUTOMATIC ELECTRIC GUIDER (PATENTED)

BLAKE ELECTRIC MFG. CO.
255 Atlantic Ave.,
Boston, Mass.



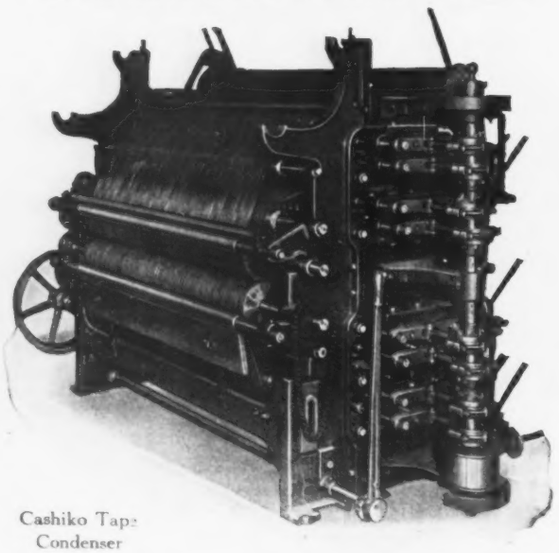
The illustration shows a special two-can dryer, with uprights arranged for five cans. Ball bearings make it unnecessary to provide any mechanical drive.

Large or small sets, vertical or horizontal.

Old dryers completely rebuilt equal to new.

FINISHING MACHINES, INC.
Builders of Textile Finishing Machinery
304 Pearl St., Providence, R. I.

CASHIKO
TAPE CONDENSERS
COMPLETE SETS WOOLEN CARDS



Cashiko Tape Condenser

Increases Production, Improves Quality
Applied to All Makes of Woolen Cards

Details Supplied Upon Request

CASHIKO MACHINE COMPANY
Office and Works: Winona St., off Shrewsbury St., Worcester, Mass.

LOGEMANN
Hand-Belt-Electric-Hydraulic

Baling — Presses

From year to year, hundreds of new names are added to the list of LOGEMANN baling-press users in the textile field.

Every year, repeat orders from users of LOGEMANN baling-presses increase steadily, denoting the satisfaction derived from this equipment.

But—

Until every mill-owner, superintendent, and operator, is familiar with the LOGEMANN line of balers for yarn, waste and finished goods, our advertising has not accomplished its purpose.

We solicit your inquiries.

LOGEMANN BROTHERS CO.
MAIN OFFICE & WORKS
1300 Burleigh St., Milwaukee, Wis.

Rags, Substitutes and Waste

Slow Movement in Rags and Fibres

Prices Generally Steady with Rags Firmer and Fine White Wastes Higher

The manufacturing end of recovered wools is not particularly satisfactory at the moment and in this it is following the woolen branch of the textile industry which is in the process of tailing out on its old orders and contracts without approaching definitely the next season which is generally favorable to woolens. Some of the plants of the industry are running 100% on their cards but the pickers of the industry are probably not running more than 60%, so it is said. Prices for fibres are steady and without downward tendency. Both the market and the industry are waiting developments. Some manufacturers in this market are moderately sold ahead on business but in general no large expansion of consuming interest is regarded probable much before the end of the year.

Some rag traders are inclined to depreciate the recent spurt in worsted rags while others look upon the situation as suggesting that this is only one of the signs, which are likely to multiply in the near future, that as the heavyweight season approaches there will be a very substantial purchasing both on the part of the mills and reworked wool manufacturers. Rag grading is not a very satisfactory proposition. With so thin a call there is little inducement to take in further supplies. Some of them have not more than one-third of their help and by the time the year comes to an end unless some very satisfactory development occurs the woolen rag business as a whole will terminate 1925 unsatisfactorily.

Imports chiefly for manufacturers' accounts continue to arrive from the old world, chiefly Great Britain. The English sorter goes more thoroughly into the matter of grading than his American associate and on the manifests of recent incoming steamers some of the knit stocks had fancy names attached to consignments such as "rose," "biscuit," "heather," etc. The only recent change in graded rags was in light blue merinos, down 3 shillings per cwt. We seem to have nothing in this country corresponding with the graded merinos of the English market which are as follows: light blue merino, 112 shillings; dark blue merinos, 56 shillings; drab merinos, 135 shillings; green merinos, 56 shillings; brown merinos, 56 shillings; dark fancy merinos, 50 shillings; red merinos, 85 shillings.

No particular feature developed in the wool waste market last week. Mills continue to resist advances in value, a habit with them, no doubt; but taking the situation as a whole and giving full consideration to the fact that good materials are scarce, the market has no reason to be nervous and before the end of the year better mill business will be seen and not at lower prices.

Quotations

(Corrected at close of business Wednesday)

Men's Wear Clips

Worsted—	
Dark	21—22
Light	32—33
Brown	25—26
Blue	34—35
Black	30—31

Women's Wear Clips

Serges—	
White	60—61
Blue	29—30
Black	26—27
Brown	36—38
Green	35—36
Light	37—38
Tan	42—43

Old Woolen Rags

Merinos—	
Coarse light	11½—12
Fine light	25 —26
Fine dark	7½— 8
Serges—	
Light	13 —14
Brown	16 —17
Blue	14½—15
Black	9 — 9½
Red	20 —20½
Green	15 —16
Knit—	
White	45 —46
Black	19 —20
Red	26 —27
Brown	19 —20
Light Hoods	26 —27

Skirted Worsted

Light	10 —10½
Black	9½—10
Blue	9 — 9½
Dark	5½— 6

Wool Waste

Lap—	
Fine white	$1.28—$1.32
Fine Colored	1.03— 1.05
Medium Colored	.50— .55
Ring—	
Fine Australian	1.24— 1.30
Fine Domestic	1.23— 1.25
Thread White Worsted—	
Fine	.98— 1.00
½ Blood	.83— .85
⅝ Blood	.70— .73
¼ Blood	.50— .53
Low	.45— .48
Thread Colored Worsted—	
Fine	.41— .43
½ Blood	.38— .40
⅜ Blood	.30— .33
¼ Blood	.28— .30
Low	.23— .25
Carpet	.18— .20
Card—	
Fine White	.60— .63
Medium White	.40— .45
Fine Colored	.20— .22
Medium Colored	.10— .12

Reworked Wool

	Cents per lb.
Serges—	
Blue	29—30
Brown	25—30
Green	29—31
Red	32—33
Black	24—25
Knits—	
White	70—75
Red	43—44
Brown	36—38
Merinos—	
Fine light	37—39
Fine dark	18—20
Coarse light	24—25
Worsted Skirted—	
Light	23—24
Blue	21—22
Dark	17—18
Brown	20—21

"THE BROADBENT"

HYDRO EXTRACTOR

FOR ALL BRANCHES OF THE TEXTILE INDUSTRY

These machines are unquestionably the most solid and substantially constructed extractors on the market

Electrically driven type No. 4

The machine illustrated is made in the following sizes, 36", 42", 48", 54", 60", 72" and 84". Suitable for direct or alternating current 1, 2 or 3 phase.

No Complicated Mechanism—Great Durability—Motor Protected Against Damp and Oil—Simple and Foolproof—Small Floor Space—Fitted with Automatic Centrifugal Clutch—Smooth and Silent Running—Self-Aligning Ball Bearings—Automatic and Continuous Lubrication.

Write for Catalogue

Sole Agents in U. S. A.

T. V. COTTER & SONS

179 Lincoln St. Boston, Mass.

Southern Representative: John Hill, Healey Bldg., Atlanta, Ga.

VEG TAN

ROLLER CALF

A Purely Vegetable Tanned Product for the Textile Trade

bringing out the many natural qualities that tend to make Calf Skin the Ideal Roll cover.

Superior in texture and finish.

Long wear and satisfaction assured.

We have had over 60 years' experience in tanning fine leathers.

R. NEUMANN & CO.

Hoboken, N. J.

Direct Factory Representatives for the South

SOUTHERN TEXTILE SPECIALTY CO.

101 Augusta St. Greenville, S. C.

Big Business

Because of the enlarged program of manufacture that present day conditions demand, the manufacturer who plans wisely and builds on a foundation of "quality" production can command "Big Business."

So definite is this trend toward quality that textile manufacturers are using every effort to produce the highest possible quality in fabrics at a reasonable production cost.

In order to accomplish these results mill men are more than ever before depending upon the distinctive work which the special purpose

Wyandotte Textile Alkalies

accomplish.

Protection to the tensile strength of the fibres, thorough cleansing of the fabrics permitting more even spreading of dyes and that soft, lofty feel which denotes quality are indications of the efficient work of these quality products.

Ask your supply man.

The J. B. FORD CO.
Sole Manufacturers
Wyandotte, Mich.

A New, Exceptionally Bright and Generally Useful Sulfur Yellow

UNDER the designation, National Sulfur Yellow 2G, we are bringing to the attention of dyers a new type of Sulfur Yellow, distinguished for its excellent solubility, level dyeing, and for its particularly bright, and greenish shade, properties that make it useful for all classes of material for which sulfur colors are employed.

Samples and full technical information may be obtained from any of our branches.

National Aniline & Chemical Co., Inc.
40 Rector Street, New York, N.Y.

BOSTON	PHILADELPHIA	SAN FRANCISCO
PROVIDENCE	CHICAGO	MONTREAL
HARTFORD	CHARLOTTE	TORONTO

NATIONAL DYES

FLETCHER TURBINE DRIVEN EXTRACTORS

are always reliable. And they are always the most economical wherever steam is available because the power cost is almost negligible when the exhaust is used for other work in the plant.

Write for the actual figures on their operating cost!

FLETCHER WORKS
Incorporated
Formerly Schaum & Uhlinger
Philadelphia, Pa.

REG. U. S. PATENT OFFICE
DECALSO

Water softeners for throwsters, scourers, bleachers, dyers and finishers

LIME & SODA Softeners
FILTERS & PURIFIERS

American Water Softener Co.
S. E. Cor. 4th and Lehigh Ave., Phila., Pa.

Card Stamping and Repeating

FOR ALL TEXTILE FABRICS

Repeating for Throw Overs for Fine and French Index

Walter W. Hodgson, Inc.
15-17 W. Lehigh Ave. PHILADELPHIA

Wayne
WATER SOFTENERS
Rapid-Rate Filters
Write for Booklets
Wayne Tank and Pump Company
3411 Canal St., Fort Wayne, Indiana

DYESTUFFS AND CHEMICALS

Sub-Committee on Fast Colors Meets

The sub-committee of the joint committee of converters and finishers, on the subject of "fast colors," met Thursday afternoon of this week at the rooms of the National Association of Finishers of Cotton Fabrics to consider the matter of prevention of misbranding of merchandise as fast color when it is not fast. The personnel of this committee is: M. J. Warner, president of the Converters' Association, chairman; John W. Manley, of the Sayles Finishing Plants, Saylesville, R. I.; John Bancroft, Jr., of Joseph Bancroft & Sons Co., Wilmington, Del.; John E. Rousmaniere, president of the Association of Cotton Textile Merchants, New York; W. D. Appel, of the Bureau of Standards, Washington, D. C.; and Prof. Louis A. Olney, Lowell Textile School.

* * *

New Color Card Shows Line of Chromotol Colors

Dunker & Perkins, 263 Summer St., Boston, have just brought out a new color card showing a complete line of chromotol colors. The company states:

"All these colors are dyed with the addition of acetate of ammonia and chrome to the dye bath. These colors exhaust very well, but for the heavier shades they recommend clearing the dye bath with an addition of acetic acid.

"All the colors possess good fastness to light and fulling and are especially recommended for the coloring of worsteds and woolens for women's and men's wear.

"Piece goods or yarn dyed by this method are left in much better condition than when dyed by the top or bottom chrome method."

* * *

Discontinues Dye Manufacture

The Puritan Dye & Chemical Co., manufacturers of dyestuffs on East Main St., Northboro, Mass., has disposed of the business and closed the plant. F. S. Bacon was president of the company and T. T. Gibson treasurer. The latter has accepted a position in Buffalo, N. Y.

* * *

Error in Rapidase Item

A printer's error in connection with a recent item on a new Rapidase booklet, prepared by the American Rapidase Co., Inc., 171 Madison Ave., New York, caused this product to be referred to as a "designing" agent instead of a desizing agent.

Miscellaneous Chemicals

Alumina Sulp. com....	1 40	— 1 45
Iron Free.....	2 00	— 2 05
Alum. Ammonia Lmp.	3½	— 3¾
Potash, Lump.....	2¾	— 3½
Ammoniac, Sal. white gr., dom.	5½	— 8
Bleach powder, per 100 lb. works, carloads..	2 00	— 2 40
Blue Stone.....	4½	— 5
Calcium Arsenate.....	7	— 7½
Chlorine, Liq. Cylinders	5½	— 9
Tanks	4	— 4¼
Copperas, ton	12 00	—18 00
Cream of Tartar.....	21	— 22¾
Epsom Salts, 100 lb...	1 30	— 2 00
Formaldehyde Spot....	9	— 9¼
Glauber Salts, 100 lb..	90	— 1 30
Glycerine (C. P.) bbls.	20	— 20½
Cans	21½	— 22
Yellow Crude.....	18½	— 19
Hydrosulphite Conc....	24	— 25½
Lead—Brown acetate..	13½	— 14
White (crystals).....	14½	— 15
Lime, acetate, 100 lb...	3 00	— ...
Potassium—Bichromate	8½	— 8¾
Chlorate crystals....	8½	— 9
Permangan, tech.....	14½	— 16
Sodium acetate.....	5	— 5½
Bichromate	6½	— 6¾
Bisulphite, 35%.....	1 50	— 1 75
Nitrite	9	— 9½
Phosphate	3¼	— 3¾
Prussiate, yellow....	10½	— 11
Sulphide, 60% fused.	3¾	— 4
30% crystals.....	2¾	— 3
Tartar emetic, tech....	28	— 30½
Tin—Crystals	41	— 41½
Bichloride, 50 deg...	16¾	— 17
Oxide, bbls.....	64	— 65
Zinc Dust.....	10	— 10½

Acids

Acetic, 28% per 100 lb.	3 13	— 3 38
Citric crystals.....	45½	— ...
Formic, 90%.....	10¼	— 11
Lactic, 22%.....	6	— 7
Muriatic, 18 deg. per 100 lb. in tank cars.	80	— 90
Nitric, 36@42 deg. per 100 lb.....	4 50	— 6 25
Oxalic	10¾	— 11½
Sulphuric, 66 deg. per ton in tank cars.....	14 00	—15 00
Tartaric	29	— ...

Alkalies

Ammonia, aqua, 26 deg.	4½	— 5
Borax, Crys. bbls.....	5	— ...
Potash, carbonate, 80–85%	6	— 6½
Caustic, 88–92%.....	7⅛	— 7⅝
Soda Ash, 58% light...	1 43	— 2 44
Contract, 100 lb.....	1 25	— 1 63
Bicarb, per 100 lbs...	1 90	— 2 25
Caustic, 76% per 100 lb.	3 20	— 3 90
Contract, 100 lb.....	3 10	— ...
Sal. 100 lb.....	1 10	— 1 25

Natural Dyes and Tannins

Fustic: Crystals.....	20	— 22
Liquid, 51 deg.....	10	— 12
Gambier, liquid	13	— 13½
Hematine, crystals....	12	— 18
Hypernic Ext.—51 deg.	14	— 15
Indigo—Madras	1 20	— ...
Logwood Extract, liq. 51 deg.	7	— 8
Crystals	16	— 18
Osage Orange, Extract, 51 deg.	7	— 7¼
Osage Orange Crystals.	14	— ...
Quercitron extract, 51 deg.	6	— 7
Sumac, Ext. dom., ref., 51 deg.	6½	— 7
Extract, stainless....	11	— 12
Tannic Acid, tech.....	35	— 40

Dyestuffs and Intermediaries

Alpha Naphthol, ref....	95	— 1 00
Crude	65	— 70
Alpha Naphylamine....	35	— 37
Aniline Oil.....	16	— 17½
Salt	22	— 24
Beta Naphthol, sublimed	55	— 60
Technical	22	— 24
Dimethylaniline	32	— 34
Metaphenylene Diamine	85	— 90
Paranitraniline	58½	— 62

Oils and Soaps

Castor Oil, No. 3.....	15½	— 16½
Olive Oil, denatured, gal.	1 20	— 1 25
Foots	9	— ...
Red Oil, lb.....	11	— 12
Stearic Acid, double presses	16	— 16½
Turkey Red Oil, 50%.	10	— 12

Adhesive and Sizing Materials

Albumen, blood domestic	50	— 60
Egg, technical	80	— ...
Dextrine-Potato	7¾	— 8¼
Corn, bags, 100 lb...	3 87	— 3 92
Do. bbls, 100 lb.....	4 14	— 4 19
Gum, British, 100 lb....	4 17	— ...
Do. bbls.	4 44	— ...
Sago flour	3½	— 4
Starch, corn, 100 lb...	3 12	— 3 22
Do. bbls.....	3 39	— 3 49
Do, thin boiling, bags, 100 lb.....	3 72	— 3 82
Do. bbls	3 99	— 4 09
Potato	6½	— 7¼
Rice	9½	— 10½
Wheat	6½	— 7
Tapioca flour	3½	— 6

Coal Tar Dyes

Direct Colors—		
Black (H-acid).....	28	— 35
Black Columbia FF..	50	— 60
Blue, 2 B.....	24	— 32
Blue, sky ordinary...	60	— 80
Blue, 1 GL.....	2 00	— 2 50
Blue, 4 GL.....	1 25	— 2 00
Blue Sky, FF.....	95	— 1 50
Blue, Fast, RL.....	190	— ...
Blue, Solamine.....	2 00	— ...
Benzo Azurline.....	75	— 80
Brown, C.....	40	— 60
Brown, M.....	70	— 90
Brown, Congo G.....	85	— ...
Brown, Congo R.....	80	— ...
Green, B.....	75	— 90
Green, G.....	1 00	— 1 05
Orange, Congo.....	60	— ...
Orange, Fast S.....	1 85	— ...
Red Fast F.....	90	— 1 00
Red, Congo.....	40	— 50
Benzo Purpurine 4 B.	40	— 60
Benzo Purpurine 10 B.....	1 25	— 1 50
Scarlet, 4 BA.....	1 50	— ...
Scarlet, 4 BS.....	2 10	— ...
Scarlet, 8 BS.....	2 15	— ...
Scarlet, Diamine B..	1 65	— ...
Violet N.....	1 10	— 1 20
Yellow, Chrysophenine	60	— 1 80
Yellow, Stilbene	90	— 95
Developing Colors—		
Black, B. H.....	60	— 90
Black Zambesi.....	1 15	— ...
Bordeaux, Dev.....	2 50	— ...
Orange, developed....	2 50	— ...
Primuline	1 00	— 1 15
Red, Dev. 7 BL.....	2 50	— ...
Scarlet, Dev.....	2 50	— ...
Sulphur Colors—		
Black	18	— 30
Blue, cad.et.....	90	— 95
Blue, navy.....	50	— 60
Brown	20	— 60
Green	55	— 1 50
Green, olive.....	25	— 50
Yellow	45	— 50
Basic Colors—		
Auramine	96	— 1 60
Bismarck Brown.....	50	— 60
Chrysoidine	40	— 65
Fuschine crystals....	1 50	— 1 75
Malachite green.....	1 70	— ...
Methylene blue.....	1 25	— 1 40
Methyl violet.....	80	— 1 15
Rhodamine B. extcone	5 50	— 6 00
Safranine	1 45	— 1 60
Victoria Blue B.....	3 25	— 4 00
Acid Colors—		
Naphthol blue blk..	40	— 70
Naphth lamine black 4 B	50	— 55
Alizarine saphirol....	2 75	— 4 00
Alkali blue.....	3 25	— 3 50
Indigotine	75	— 1 30
Induline (water soluble)	75	— 80
Soluble Blue	3 00	— 3 75
Sulphoneyanine	70	— 95
Sulphone Blue R....	60	— 95
Patent Blue A.....	2 85	— ...
Resorcein brown	80	— 90
Guinea green.....	1 00	— 2 20
Wool green S.....	70	— 1 70
Orange II.....	24	— 30
Orange GG crys.....	60	— ...
Acid Fuchsine.....	80	— 90
Azo eosine G.....	65	— 82
Crocein scarlet.....	1 15	— 1 30
Fast red A.....	75	— 80
Azo yellow	1 35	— 1 40
F. Light Yellow 2 G.	2 00	— ...
F. Light Yellow 3 G.	3 00	— 3 25
Naphthol, yellow....	1 35	— 1 40
Chrome Colors—		
Aliz. Black B.....	1 50	— ...
Diamine Black PV...	70	— ...
Chrome Blue Black..	48	— 54
Chrome Brown.....	60	— 1 25
Chrome Green.....	75	— 1 50
Chrome Yellow.....	45	— 1 10
Indigo—		
Synthetic 20% paste.	15	— 15½
Contracts	14	— 14½

Firmness in Textile Dyes and Chemicals

Broadening in Demand Accompanied by Price Advances in Certain Materials

The broadening in the demand for industrial chemicals anticipated for the fall months has materialized to a considerable extent and the entire market presents today an appearance of greater activity and increased price firmness. The same condition of heavy withdrawals of alkalies on contract which have been in effect in the market for some time continue to obtain and both caustic soda and soda ash show evidences of well maintained strength. The situation in bleaching powder and liquid chlorine is also decidedly healthy and new contract prices on bleach are being absorbed satisfactorily.

Price movements have been largely upward, one of the most important changes having been the advance in the price of acetate of lime to $3 per hundred pounds. Acetic acid was also advanced in proportion and the quotation on the 28% material is now $3.13 to $3.48 per hundred pounds. Other advances were largely fractional in nature and scattered through the list. Weakness in aqua-ammonia continues to be manifested and the competitive situation in this market has forced prices on the 26 degree material down to a range of 4½ to 5c per pound.

While quotations on coal tar dyes and on intermediates of interest to textile manufacturers show little significant change, there is a marked increase in volume of operations of these materials and a decidedly healthier atmosphere throughout the market. This of course is in line with the improved situation in the textile industry.

Dye & Chemical Notes

Ciba Announces New Dyestuff

An important addition to the group of Neolans is announced by Ciba Co., Inc. The company states: "Neolan Yellow GR produces exceptionally fast to light and milling shades from an acid bath. All other properties which come into question in dyeing wool fast are also very good.

"Neolan Yellow GR levels very well, and is therefore suitable for combination with other Neolans for the production of the fastest piece goods. Neolan Yellow GR is especially suitable for slubbing and loose wool. This new color possesses better tinctorial strength and levelling properties than the old marks, Neolan R. and B.

"This new Neolan color is also

EVEN DYEING ASSURED BY DIASTAFOR

— Standardized and reliable, Diastafor is a perfect de-sizing agent for the textiler.

— Easy to use, it improves the quality of your fabrics and assures absolutely uniform dyeing.

THE FLEISCHMANN COMPANY
Diastafor Dept.
695 WASHINGTON STREET NEW YORK, N. Y.

DIASTAFOR WAREHOUSES:—
Boston, Mass. Cincinnati, Ohio. New York, N. Y. Philadelphia, Pa.

We Ought to Know

We've spent over thirty years building tanks for all sorts of uses. Our engineers, designers and workmen are constantly thinking tanks. Our products are living up to their reputation in all parts of the country.

The Caldwell Steel Tank is like our other products in that it reflects all the excellence of character that such experience produces. You can rely upon it for unusual performance.

Send for Catalog

W. E. Caldwell Co.
Incorporated
2060 Brook St., Louisville, Ky.

Caldwell TANKS AND TOWERS

NOTTINGHAM CURD TALLOW CHIP SOAP

No. 2 and No. 3 Chip

POTASH FIG SOAPS
for Woolens and Worsteds made with
Red Oil Olive Oil
Amber Oil
Olive Foots

TEXTILE SOAPS
MADE IN PAWTUCKET, R.I.
J.O. DRAPER CO.

Palm Oil
Curd SOAP
Olive SOAP
Chips or Bars
Soap Powder
For Mill Floors

Established 1860. Incorporated 1905 LET US SUPPLY YOU

S. R. DAVID & COMPANY
INCORPORATED

Dyestuffs

252 Congress Street Boston, Mass.

Scientific Kier Boiling

CONSISTENT quality is maintained by users of SOL-ESCO. This scientific detergent completely and evenly removes the impurities from cotton fibres.

Its use results in pure cellulose, highly absorbent and free of all resist spots. The goods take a perfect and permanent bleach. Less chemick is required.

SOL-ESCO users include many of the largest bleacheries in the country.

Let us tell you and *show* you what Sol-Esco will do for you.

THE COWLES DETERGENT COMPANY
540 Commonwealth Building, Cleveland, Ohio

SOL-ESCO

Hungerford Filters
for Clear Water
Hungerford Softening Filters
for Soft Water

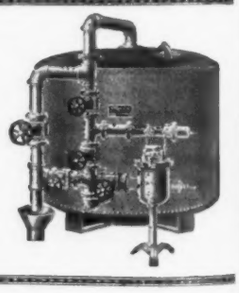
HUNGERFORD & TERRY, Inc.
CLAYTON, N. J.

Roberts Filters

Roberts Filters
Provide Pure Clean Water for All Industrial Purposes

We manufacture pressure and gravity filters especially adapted to meet the exacting needs of the textile industry—

ROBERTS FILTER MFG. CO.
Darby - - Penna.



PURE WATER

ESTABLISHED 1882
WALTER F. SYKES & COMPANY
IMPORTERS OF
FRENCH ANILINE COLORS AND DYEWOOD EXTRACTS
8 Lispenard Street, NEW YORK
PHILADELPHIA United States Agents BOSTON

ST. DENIS DYESTUFF & CHEMICAL CO.
(Poirrier)
Works—St. Denis (Seine,) France Works—Besseges, France

ONYX OIL & CHEMICAL CO.
JERSEY CITY, N. J.
We cater to the wants of the Bleacher—Dyer—Throwster—Printer and Finisher

"Shafco" Squeeze Machinery.
"Shafco" Centrifugal Pumping Units.
Cloth Room Machinery.

BRIGGS SHAFFNER COMPANY
WINSTON-SALEM, N. C.

Dyestuffs and Chemicals—Continued

suited for ordinary and weighted silk, such dyeings being exceptionally fast to light, water, washing and perspiration. It is also recommended for wool and silk printing, with or without the addition of chrome acetate."

* * *

New Light Fast Blue for Wool

The National Aniline & Chemical Co., Inc., has just brought to the attention of dyers a new, bright blue for wool designated National Fast Blue BL. The company states: "This new addition to the National line is distinguished for its low cost and extreme fastness to light, qualities that recommend it for the very widest use on almost all classes of fabrics made of wool where economy and fastness to light are essential. This new product possesses extreme solubility, dyes level, and embodies the further good qualities of fastness to water, stoving, hot pressing, decatizing and rubbing.

"It is recommended as a self color for bright shades of blue, or for use in combinations with other acid dyes of the fast to light group for the production of compound and mode shades on all classes of wool fabrics where fastness to light and economy are matters of first consideration, as in the coloring of women's wear fabrics, floor coverings, draperies, etc.

* * *

New du Pont Vat Green

The Dyestuffs Department of E. I. du Pont de Nemours & Co. has just placed on the market their new vat green, Ponsol Brilliant Green G. Paste, which produces on cotton, shades fast to chlorine, washing and light. The announcement states:

"By combination with other colors of the vat series possessing similar exceptionally good qualities, it is possible to produce a series of bright greens from the bluest to the yellowest tones.

"This product is suitable for cotton goods in any stage of manufacture and is especially desirable for such materials as shirtings, towelings and dress goods which require good fastness to chlorine, washing and light. It can be applied to piece goods either on the padder or the jig, and when properly applied is useful for silk and rayon."

* * *

Two New Rhodamines Offered

E. I. du Pont de Nemours & Co. have announced through their Dyestuffs Department, the addition of two new basic colors to their line, Du Pont Rhodamine 6GDN Extra and Du Pont Rhodamine 5GDN Extra. They are offered especially for the printing trade for bright yellowish pinks on wool, silk and cotton. The company states:

"They are particularly recommended for color discharge work on all fibres, as they are unaffected by this discharge process, and retain their brilliancy.

"They are also offered for dyeing bright yellowish pinks on silk, rayon, cotton and wool. On silk they display a pleasing fluorescence. They are especially suitable for stripes in woolen blankets and other materials which are to be subsequently bleached, as they are not affected by this process. The fastness to washing is also sufficiently good for such use.

"The two products are identical in properties, but Du Pont Rhodamine 5GDN Extra is bluer in shade."

Credit Unions Act Offers Employe Thrift Opportunity

Textile executives all over Georgia are displaying great interest in the new Credit Unions Act passed by the State Legislature at its last session and recently signed by Governor Walker, as they feel that it establishes a means of encouraging employes to save money; provides a way in which they can borrow money when needed without paying exorbitant interest rates, and will ultimately bring about increased morale in many plants.

The measure provides that any group of ten or more persons may form a credit union by applying to the Secretary of State upon the proper forms. This application and a copy of the proposed by-laws are to be turned over to the Superintendent of Banks, who is to determine whether or not the proposition is workable before a charter is issued. If the application is granted, the members must elect officers, a board of directors, a supervisory committee, and a credit committee to handle the affairs of the corporation. Shares of stock in the union are to be sold for $5.00 each, but a person wishing to join may pay for his shares as he can. This establishes the saving feature of the credit union. And finally, the measure provides that the union can lend money to members, upon recommendation of the credit committee, at rates of interest not to exceed one per cent a month.

The organization thus serves as a bank acting under the supervision of the Superintendent of Banks and the control of the employes as officers and directors. At the same time it serves as a loan organization for the "poor man." As most executives know, textile employes are suspicious both of regular banks and company banks; thus the only sort of a bank that will enable them to take the proper care of their money is one such as is provided by the credit union.

LONG ISLAND CITY, N. Y.—The Cornellist Textile Corp., Ravenswood Dye Works, Inc., and C. R. Finishing Corp., will be combined under the name of Cornellist, Inc., at 45-63 Jamaica Ave., Long Island City, which will assume all outstanding accounts payable of the three mentioned above. W. P. Cornell is treasurer.

AMALIE PRODUCTS

Amalie RAYON-OIL

A product of the Sonneborn Laboratories

To dyers and finishers of rayon fabrics—

This unusual softener has been specifically designed for you by our technical staff after considerable research and extensive practical tests.

AMALIE RAYON-OIL is of unusual strength in concentration, containing a large percentage of neutral oil, yet completely soluble. It is highly penetrating and will not impart any objectionable odors to the fabric or skeins.

AMALIE RAYON-OIL is particularly adaptable for finishing silk piece goods as well as mixed fabrics containing cotton and rayon. It will fulfill your special requirements more efficiently and enhance the appearance of your finished goods.

The many disadvantages that are found in ordinary softeners and oils have been entirely removed in the development of AMALIE RAYON-OIL through an exclusive process evolved by our technical staff.

Investigate it! — The opportune time is *now* !!

L. SONNEBORN SONS, Inc.

Manufacturing Chemists to the Textile Industry

114 Fifth Ave.

New York

L. SONNEBORN SONS, INC., NEW YORK, N.Y.

The Perfect Watchclock System for Large Plants

DETEX "BOSTON"

Magneto Type Watchclock System

The Detex Boston costs less in the long run than any other watchclock system—and, properly installed, it will last as long as your buildings. Installations in the General Electric plant and many others have been in continuous use 25 to 40 years without interruption and at incredibly low up-keep cost.

Detex Boston offers several distinctive advantages over all other systems:

One unit permits any number of watchmen (up to 60) to register simultaneously, *on one record*:

A supervisor or foreman of watchman can tell by a glance at the record just where any or all the watchmen are at any time—or annunciators can easily be connected which indicate registration without opening the clock:

There is nothing for the watchman to carry but a small crank. There are no batteries, transformers nor current, except what is generated to make the record when the watchman turns the crank.

Let us give you the full story of this superb system.

Write for literature

DETEX WATCHCLOCK CORPORATION

72 Varick Street NEW YORK — 4143 Ravenswood Ave. CHICAGO — 27 Beach Street BOSTON

One night of faithful watching may prevent months of non-production. DETEX Watchclocks insure faithful watching every night

Other DETEX Watchclock Systems

PATROL Portable—The latest and most versatile of all portable watchclock systems. Equally satisfactory for 1 or 100 stations.

NEWMAN Portable—The best known and most extensively used watchclock system in the world. 1 to 30 stations.

ALERT Portable—Ideal for plants requiring up to 30 stations. Initial cost moderate—maintenance extremely low.

ECO Portable—Most accurate watchclock. Records practically to minute. Important in some cases. 1 to 20 stations.

Seating Equipment is an investment —not a luxury

A workman comfortably seated at his job is capable of producing far more work than one who is wasting his energy working under body strain. You are not pampering people by properly seating them for work, but you are boosting their efficiency and capacity for production.

No. 1018 Chair

This is an all around general Utility Chair for either factory or office. Its durability and service is unlimited; it is attractive and comfortable; it is very reasonably priced. This Chair is built in seat heights from 16" to 26." The entire Chair excepting the seat is of steel, firmly rivetted and braced, and finished in a rich standard Olive Green enamel. The seat is of hardwood, saddle type; 14½" x 14½" square.

No. 1018 Chair

ANGLE STEEL STOOL CO., PLAINWELL MICHIGAN

STOOLS CHAIRS BENCHES TRUCKS TABLES CABINETS BENCH LEGS DESKS

Write for Catalog with Prices

Mid-Year Silk Review

(Continued from page 109)

have also been brought out recently in large quantities.

Gain in Velvets

Early in the year, velvet sales were reluctant. But since spring there has been increasing demand for velvet, especially during the early months for use in sport coats, and as trimmings on summer hats. Since July, orders have been coming in strong. Chiffons, brocades and damasks are all included in the demand. Every bulletin from Paris brings confirmation of the report that velvet is being used in large quantities and for a diversity of purposes—hats, gowns, wraps, shoes and bags. Stocks are low in the manufacturers' hands, as it has taken some time to speed up production.

The tendency for women to dress more practically has been one reason why ribbons have not enjoyed a better year. The extremity of severe styles, however, seems to have passed. French dressmakers and milliners are using more ribbons but whether this effect will find favor here is a question. At the moment, wide ribbons seem to lead, in light textures and plain colors.

The tie silk men experienced a much better six months than the same period last year. The season coming promises to continue busy. Stripes were good early in the year. Foulards were favored for spring, and prints good through the summer. Stripes are now on the wane, but their brilliant colors are transferred to plaids. Figured tie silks are selling rapidly in large, bold, striking designs, and in vivid colors. Satins that lend themselves to rich backgrounds are used.

The general prosperity of the broad silk business is reflected in the sewing silk trade. The simplicity of fashions attracted many to home sewing, effecting a general improvement in the line since last fall. July and August have been especially good for this time of year. Although the sales of machine twists have not been up to normal for the last six months because of the slowness in the men's clothing and shoe trades, an improvement in both lines is under way at present.

The better trade conditions throughout the entire country during the first six months of 1925 were reflected in the hosiery trade. There has been a pronounced increase in the demand for sheer or chiffon hose reported from all quarters. Sales of this class of merchandise were hitherto restricted to cities, but a recent survey showed that there is an unexpected growth of sales in small towns and in some instances even in the rural districts. Some factors in the trade report a gain of 40 to 60% in sales of sheer hose this year over the same period last year. Light shades and flesh tints are still in great demand. A comparison of the shades worn today with those of a few years ago shows that manufacture at that time was approximately 90% black and 10% colors; while today the figures for black and colors are practically reversed. The gain in colors during the last year has been about 10%.

Silk gloves were good up to the summer when the warm June weather interfered with their sales. It was a novelty season with short French cuffs and embroidery in fashion. Glove silk underwear was not particularly good the first half of 1925 on account of style tendencies reducing the number of articles of underclothing to a minimum. To compete with the slump in demand, there were placed on the market for quantity selling, garments made of glove silk excessively weighted; but the public cannot long be deceived as to the superiority of the higher grade article.

All types of laces were good for the early part of the year—and the lace industry enjoyed for a short period better business than it had known the previous year. The slackness that followed this busy period was due partly to the slackness in the dress industry, and partly to the vogue for printed silks. Today the only good demand is for metallic laces, gold, silver and in combination with colors and black. These are now made in 50-inch widths. Paris has sponsored them for evening wear. It is expected that silk lace dresses, such as Chantilly, will be widely used for afternoon and dinner gowns this season. There is a slightly improved demand for silk nets. As in all other silk lines, bright colors are wanted.

Raw Silk Consumption

A large consumption of raw silk at conservative prices has characterized the first half of 1925. Monthly imports averaged 4,000 bales over those for 1924. As for quality, raw silk has not shown noticeable improvement; while the price margins between highest and lowest grades narrowed down considerably. Raw silk prices moved within very narrow limits for the first six months of the year. Not since 1921 have silks held for any length of time such a steady level. However, the new season has started in with higher cocoon prices.

The market stability is attributed by some raw silk men to the fact that American buyers are proceeding with much more forethought in their transactions. In place of the general tendency to buy when the market is rising, there is a growing inclination to place orders when the price drops. It is said that buyers have learned through experience that the rising market eventually comes down; and that a better knowledge of stocks and imports helps them to judge whether the rise is a natural one, due to a lack of supply, or only temporary.

Political disturbances and strikes in China this summer have interfered with shipments, and at the time this report goes to press, there is no relief in sight. When the Canton exports will be resumed is problematic. Stocks of Canton silks in this country were

COMMISSION AND CONTRACT WORK

WASTE
CUSTOM SERVICE
DUSTING
PICKING
CARDING
GARNETTING
ROLL CARDING
EXPERT ATTENTION
Samples and Prices on Request
BOLGER BROTHERS
1139-51 East Chelten Avenue
Germantown, Philadelphia, Pa.

COMMISSION WEAVING
Automobile Fabrics and all kinds of Fancy Woolens and Worsteds.
E. J. HYLAN TEXTILE CO.
Lowell, Mass.

Commission Knitting Wanted
on Balbriggans and Jerseys, 30" Crane Machines.
Address Adv. 813, Textile World, 334 Fourth Ave., New York.

COMMISSION TWISTING
Delivery in skeins, tubes, cones, balls or cabled
ARCHER YARN COMPANY,
69 Sprague St., Providence, R. I.

North Adams Garnetting Co.,
264 State St., North Adams, Mass.
CUSTOM PICKING AND GARNETTING.

"Cash" or "Inventory"?

Look over your inventory and see if some of the items—machines that have outgrown their usefulness, odds and ends of equipment, yarns or dyes—might not just as well be entered as "cash."

Then make out a list. Send it to the Clearing House Department of Textile World and at a small expense you will find buyers ready to purchase your articles.

Textile World, 334 Fourth Ave., New York

not sufficient to meet the emergency, and dealers who have contracted for future delivery are hard put to it to fulfill their contracts. This is the more unfortunate as those who have shown an increasing preference for Cantons are returning to other available silks.

The Italian crop is estimated as 25% less than last year—the shrinkage due to the adverse weather conditions during the cocoon rearing season. As in recent years, Italian silks, despite their high quality, have not been able to compete with Japanese silks because of price.

Throwsters Active

Activity in the throwing mills, according to the Statistical Bureau, has averaged about 90% with many members reporting 100% activity—a decided improvement over a year ago. Business began to gather strength last autumn. By January, it had reached a good level, and has increased ever since. This is the best continued business throwsters have known since the period just after the war. Prices are on a better scale than they have been in years. Labor has presented more or less of a problem, but outside of this disturbance, the year has been most satisfactory to throwsters. The demand for crepe has at times exceeded the spindle capacity available, and work has been rejected on this account. Georgettes and hard twisted yarns have kept the mills active. The demand for organzine and tram has been irregular, although hosiery tram is fairly normal at present. In comparison with conditions a year ago when buyers hesitated to make commitments ahead, the present practice is to place orders for about two months ahead—which should make for a healthy and conservative buying plan, resulting in steady production.

Spun silk has been exceptionally active the last six months. The mills have run close to capacity production schedule. While there was some accumulation of production at the beginning of this period, there was an actual shortage around July 1. The season has called for spun silk in quantities for tub silks, radiums, satins, charmeuse and shirtings. Crepes have been made with filling of spun silk, and yarn composed of combination raw and spun.

Rayon Production Gains

Increased production and improved methods of manufacture have marked the year in rayon, as it is now termed in English-speaking countries. As a complement to silk, rayon has found a large field for making such fabrics as brocades and acid prints. In combination with cotton and wool, new color combinations and decorative effects are easily produced. New processes of rayon manufacture have succeeded in reducing the size of the filament considerably, giving the fabric softness, pliability and strength. The major portion of rayon manufactured still is consumed by the knit goods industry.

COMMISSION & CONTRACT WORK

UNITED WOOL DYEING & FINISHING COMPANY
DYERS and FINISHERS
KNITTED AND WOVEN
WOOLEN AND WORSTED
PIECE GOODS OF
EVERY DESCRIPTION
SPECIALISTS ON
BROADCLOTH-PEACH BLOOM - BOLIVIAS
PILE FABRICS
CANAL STREET
PASSAIC, N.J. TEL. 3469

WISTER SPINNING COMPANY, INC.
GERMANTOWN, PHILA.
GARNETTING & SPINNING
QUALITY NOT PRODUCTION
CAPACITY 1,500,000 LBS. PER ANNUM
EVERETT H. BROWN, PRESIDENT
WARREN SHEBLE, SECY. AND TREAS.

Silk, Cotton, Worsted, Artificial Silk, Linen, and Novelty Yarns, Twisting, Doubling, Reeling, Cops, Cones, Tubes, and Skeins. Winding in every form, single and multiple.
WINDING?
Telephone
Trenton, N. J., 4308
SCIENTIFIC TEXTILE CO.
Morrisville, Bucks Co., Pa.

Phone Union 4280
Natural RAYON Dyed
we specialize in winding and copping it
RAW ARTSILK CO., 721 Hudson Ave., West New York, N. J.

The TEXTILE CLEARING HOUSE

Men Wanted

WANTED—RAYON TECHNOLOGIST

who is thoroughly familiar with the production of Rayon and especially the purification of the raw material. Man of chemical training preferred but not absolutely essential. Please give full experience, references and salary expected.

Address Adv. 838, Textile World,
334 Fourth Avenue, New York.

WANTED

Young man with good common sense and college education as an assistant to the head of a textile mill. Wonderful opportunity awaits the young man for whom this advertisement is intended.

Address Adv. 832, Textile World,
334 Fourth Ave., New York.

Men Wanted

HOSIERY SALESMAN

to sell exclusively a line of fine gauge ladies Mock seam hosiery, to the jobbing and large retail trade. State experience in detail in your first letter.

Address Adv. 837, Textile World,
334 Fourth Avenue, New York.

Position Wanted

SUPERINTENDENT OF COTTON YARN MILL

Desires to connect with concern requiring the services of an experienced man, highly successful in present position, manufacturing yarns for sewing threads, plain and cabled shoe threads a specialty.

Efficient, economical management assured.

Will consider opening with reliable and progressive concern only, with future prospects, commencing at a reasonable salary. Age 44 years.

Address Adv. 833, Textile World, 334 Fourth Ave., New York

GERMAN, DESIGNER AND MANAGER

Age 47, of reputed ability and personality—At present connected with one of the greatest woolen concerns of North Europe—Many years experience—A-1 References—Expert in Jacquard and Novelty Designing—Graduate of Textile Colleges in Germany. Seeks immediate or later connection with reliable concern.

Address Adv. 834, Textile World,
334 Fourth Ave., New York.

Position Wanted

Superintendent Worsted Yarn Mill.
Wool to Yarn (Bradford System). American, married, 38 years old. **Spun all counts to 50s warp and knitting in gray, heather and all fancy mixtures. Good references.**

**Address Adv. 716, Textile World,
334 Fourth Ave., New York.**

Man—27—University and Textile School Training

Year's experience as executive of small mill, desires position in mill or textile mercantile house.

Address Adv. 724, Textile World,
334 Fourth Ave., New York.

Raw Wool Market

(Continued from page 139)

of particularly good Bs were sold at $1.00.

Fleece and territory wools have not changed, demand for all grades being fair and prices steady at last week's level. Sale of 75,000 lbs. Indiana fine delaine was made at 53c, while quarter blood Missouri brought 51c, quarter blood Indiana 51½c, Ohio quarters are held at 52c and higher. Three-eighths bright fleece has sold at 53c and low bright quarters at 44c and 45c. The above sales indicate a clean cost of 90c to 92c for quarter, $1.00 for three-eighths, $1.15 for half blood and $1.36 for fine delaine. No important sales of territory have been reported as supplies, here are small. Prices are on a $1.30 level or higher for fine staple, $1.18 for half blood and 95c for quarter blood.

Raw Wool Notes

The annual meeting of the Boston Wool Trade Association will be held Tuesday, Nov. 17 at the Chamber of Commerce Building. The business will be routine covering election of officers for the ensuing year.

* * *

Wool salesmen were few and far between in Philadelphia Wednesday afternoon considering the large number than attended a golf tournament held at Whitemarsh Country Club, near the city, under the auspices of the Philadelphia Wool & Textile Association, and those who have left for Florida to become realtors. Teams were formed to represent dealers and others to uphold the reputation of the manufacturers, resulting in a strenuous afternoon for all.

* * *

WASHINGTON, D. C.—Bradford exports of wool and wool manufactures to the United States during September totaled $1,608,862, $1,179,780 less than in September, 1924, reports Vice Consul G. L. Fleming to the Department of Commerce. Shipments of wool totaled $432,423, a decrease of $77,309 from August and $66,935 less than a year ago. Exports of wool and noils and wastes which amounted in September, 1924, to $1,209,816 totaled only $205,491 last month, a decrease of $1,004,325. As compared with August, shipments were $87,350 lower. Exports of wool woven fabrics during September exceeded September, 1924, by $59,517 and were $107,547 larger than in August.

SPRINGDALE, CONN. The plant of the British-American Mfg. Co., Inc. has been disposed of to Frank M. Robertson, New York, an attorney, acting for Mrs. H. C. McKeever, one of the largest stockholders, and other affiliated interests. The property was secured for $175,000. The company has been in litigation for a number of years, and the mill has been idle since last March. It is said that a new organization will be perfected to continue the business.

The TEXTILE CLEARING HOUSE

Situations Wanted

Manufacturers who are in need of superintendents or overseers for any department of mill work may learn of suitable men upon application by mail or telephone to C. T. DONLEVY, care Textile World, 65 Franklin Street, Boston, Mass.

BOSS DYER IN WOOLEN OR WORSTED MILL. Position wanted by man 46 years of age, German, married. Worked on woolen and worsted pieces, ladies' and men's wear, raw stock, etc. Familiar with all makes of dyeing machinery. Good recommendations.
O. B. 1205, Textile World, Boston, Mass.

TEXTILE CHEMIST. 48 years of age, American, married. Open for position. Experienced in analyzing and testing dyestuffs, soaps, softeners, oils, chemicals, yarns and materials. Is also a practical dyer. Good recommendations.
O. B. 1206, Textile World, Boston, Mass.

OVERSEER OF WOOLEN CARDING. Married, American, 46 years of age, worked on all classes of goods made from wool, shoddy and cotton mixes. Familiar with all makes of carding machinery. Good references.
O. B. 1210, Textile World, Boston, Mass.

ASST. DESIGNER OR ASST. SUPT. IN WOOLEN MILL. Position wanted by man 29 years of age, American, married. Worked on overcoatings, suitings, ladies dress goods and cloakings. Good recommendations.
O. B. 1214, Textile World, Boston, Mass.

SUPT. WORSTED YARN MILL—ASST. SUPT. Position wanted by man 46 years of age, American, married. Worked on warp and knitting yarns. Familiar with all makes of machinery. Good references.
O. B. 1215, Textile World, Boston, Mass.

OVERSEER WOOLEN SPINNING. Position wanted by man 38 years of age, Canadian, married. Worked on knit goods, tweeds, suitings and blankets. Familiar with D & F, J & B and Platt mules. Good recommendations.
O. B. 1216, Textile World, Boston, Mass.

ASSISTANT DESIGNER IN WOOLEN MILL. Position wanted by man 23 years of age, American, single. Worked on woolen cassimere, overcoatings, and fancy worsteds. Familiar with Knowles looms. Good recommendations.
O. B. 1217, Textile World, Boston, Mass.

SUPERINTENDENT OR MANAGER OF WOOLEN MILL. Position wanted by man 48 years of age, Scotch-American. Worked on all classes of woolen goods. Familiar with the general run of woolen mill machinery. Good recommendations.
O. B. 1218, Textile World, Boston, Mass.

MANAGER OR SUPT. WOOLEN OR WORSTED MILL. Position wanted by man 40 years of age, American, married. Worked on all classes of woolens and worsteds. Good recommendations.
O. B. 1219, Textile World, Boston, Mass.

COTTON LOOM FIXER. Position wanted by man 23 years of age, American, married. Worked on all kinds cotton goods. Familiar with jacquards, Crompton, Knowles, Whitin, Draper and Calvin looms. Good recommendations.
O. B. 1220, Textile World, Boston, Mass.

OVERSEER WOOLEN CARDING—SECOND HAND. Position wanted by man 49 years of age, American, single. Worked on all classes of goods. Familiar with D & F, Cleveland, English cards and tape condensers. Good recommendations.
O. B. 1221, Textile World, Boston, Mass.

OVERSEER DYEING IN COTTON MILL OR OVERSEER DYEING & BLEACHING. Position wanted by man 29 years of age, American, married. Worked on raw stock, piece dyes, skein and warp dyeing. Familiar with all kinds machinery. Good recommendations.
O. B. 1222, Textile World, Boston, Mass.

MANAGER OR SUPT. OF WOOLEN MILL. Position wanted by man 44 years of age, American, married. Worked on all grades of woolen and worsted goods, cotton warp, etc. Familiar with all makes woolen machinery. Good recommendations.
O. B. 1225, Textile World, Boston, Mass.

OVERSEER DYEING AND FINISHING IN WOOLEN MILL. Position wanted by man 33 yrs. of age, English, married. Worked on cotton warp shirtings, suitings, cloakings and fancies, low grade woolen shirtings and dress goods. Familiar with dyeing and finishing machinery. Good recommendations.
O. B. 1226, Textile World, Boston, Mass.

ASST. SUPT. OR OVERSEER WEAVING IN COTTON OR SILK MILL. Position wanted by man 26 years of age, Hollander, single. Worked on all classes cotton, art silk, lenos, marquisette, etc. Familiar with C & K, Whitin and Draper looms. Good recommendations.
O. B. 1227, Textile World, Boston, Mass.

OVERSEER WEAVING OR ASST. SUPT. & DESIGNER IN WOOLEN MILL. Position wanted by man 41 years of age, American, married. Worked on all grades of woolens, mixes and some worsteds. Familiar with Knowles looms. Good references.
O. B. 1228, Textile World, Boston, Mass.

OVERSEER WINDING, SPOOLING, REELING, ETC. IN COTTON MILL. Position wanted by man 39 years of age, English. Worked on hosiery yarns, mercerized yarns, etc. Familiar with all makes of machinery. Good recommendations.
O. B. 1229, Textile World, Boston, Mass.